Draft Initial Study / Proposed Mitigated Negative Declaration

Olive Avenue Widening Project

City of Novato, California

Prepared for:

City of Novato
922 Machin Ave.
Novato, CA 94945

Attn: Petr Skala,
Associate Engineer
pskala@novato.org
415.899.8237

Prepared by:

WRA, Inc.
2169 G East Francisco Blvd.
San Rafael, CA 94901

Attn: Rob Carnachan
robert.carnachan@wra-ca.com

In Association with:

Underwood & Rosenblum, Inc.
1630 Oakland Rd., Suite A114
San José, CA 95131

June 2025

WRA#27346

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List of Acronyms and Abbreviations

AB	Assembly Bill
APE	Area of Potential Effect
APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
BMPs	best management practices
CAAQS	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CAP	Clean Air Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAP	Climate Change Action Plan
CCFPD	Contra Costa County Fire Protection District
CCR	California Code of Regulations
CCWD	Contra Costa Water District
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
Cfs	cubic feet per second
CGS	California Geological Survey
City	City of Novato
CMP	corrugated metal pipe
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
Corps	United States Army Corps of Engineers
CWA	Clean Water Act
C&D	construction and demolition
dB	decibel
dBA	A-weighted sound level
DBH	diameter at breast height
DOT	Department of Transportation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EBMUD	East Bay Municipal Utility District
ESA	Endangered Species Act

EPA	Environmental Protection Agency
ETWU	estimated total water use
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FIRM	Flood Insurance Rate Map
GHG	greenhouse gas
GIS	Geographic Information System
Inventory	Rare Plant Inventory
IPac	Information for Planning and Consultation
IS/MND	Initial Study/Mitigated Negative Declaration
L_{dn}	day-night average noise level
L_{eq}	energy-equivalent noise level
L_{max}	maximum noise level
LSA	Lake or Streambed Alteration
LSAA	Lake and Streambed Alteration Agreement
MAWA	maximum applied water allowance
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
$MMTCO_{2e}$	million metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standard
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NCCP	Natural Community Conservation Plan
NFHL	National Flood Hazard Layer
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_x	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
OHWM	Ordinary High Water Mark
O_3	ozone
OSHA	Occupational Safety and Health Administration
OSR	open space recreation
PG&E	Pacific Gas and Electric Company
$PM_{2.5}$	fine particulate matter
PM_{10}	coarse particulate matter
PPV	peak particle velocity
Rank	California Rare Plant Rank
RCP	reinforced concrete pipe
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gas
RMP	**Restoration Management Permit**
RMS	root mean square
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SFBAAB	San Francisco Bay Area Air Basin
SMART	Sonoma-Marin Area Railway Transit
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan

SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
THPO	Tribal Heritage Preservation Officer
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
VdB	vibration decibel
VMT	vehicle miles traveled
WMP	Waste Management Plan
WRA	WRA, Inc.

1.0 PROJECT INFORMATION

Project Title	Olive Avenue Widening Project
Lead Agency Name & Address	City of Novato *Public Works Department* 922 Machin Avenue Novato, CA 94945
Contact Person & Information	Petr Skala *Associate Engineer* Tel: (415) 899-8237 pskala@novato.org
Project Location	The project would occur in two locations: • The first location is in the City of Novato, along Olive Avenue between Redwood Boulevard and Railroad Avenue. • The second location includes a segment of Pacheco Creek located within a parcel owned by the City of Novato north of Hamilton Parkway and west of Aberdeen Road, adjacent to the Novato Skate Park.
Project Sponsor's Name & Address	City of Novato *Public Works Department* 922 Machin Avenue Novato, CA 94945
Description of Project	Install existing aboveground utilities in an underground joint utility trench, widen and improve Olive Avenue, including new pedestrian and cyclist improvements, replace an existing cross culvert under Olive Avenue with a 4x2 reinforced concrete box culvert, and enclose an open drainage ditch (Olive Ditch) into a single box/double box culvert. Habitat enhancement activities along Pacheco Creek, including weed treatment and planting of native riparian species.
General Plan Designation and Zoning	The Olive Avenue right-of-way has no specific General Plan or zoning designation. The area north of Olive Avenue has a General Plan land use designation and zoning classification of General Commercial (CG), Mixed-Use (MU), and Affordable Housing Opportunity (AHO) Overlay. The area south of Olive Avenue is classified as General Commercial. These lands are also within the Downtown (D) Overlay. The Pacheco Creek riparian enhancement site north of Hamilton Parkway has a General Plan land use designation of Parkland and is zoned as Planned District with an F2 District overlay. The F2 District applies to lands within a secondary floodway.
Surrounding Land Uses and Setting	Olive Avenue is a two-lane major collector roadway running east-west. Nearby land uses include a commercial shopping center, commercial businesses, industrial warehouses, and a gas station.

	The Pacheco Creek riparian enhancement site is surrounded by lands zoned as Planned District with an F2 District overlay. Nearby land uses include open space, the Novato Skate Park, and single-family residences east of Aberdeen Road.
Other Public Agencies Whose Approval may be Required	Please refer to *Section 2.6, City Entitlements and Other Public Agency Approval* for a list of the regulatory agencies that may have permitting or approval authority over certain aspects of the project.

2.0 PROJECT DESCRIPTION

2.1 Background and Purpose of the Project

In 2004, an application was submitted to the City for the construction of a mixed-use development project, the Village at Novato, on parcels 143-011-07, 143-011-08, and 143-011-05, east of Redwood Boulevard, and north of Olive Avenue and a stormwater drainage feature located adjacent to Olive Avenue, hereinafter referred to as Olive Ditch. A commercial center anchored by Trader Joe's was constructed on parcel 143-011-07, which is immediately adjacent to Olive Ditch and Olive Avenue. At that time, stormwater flow in Olive Ditch was evaluated, and an elliptical 69-foot-long, 38-inch by 60-inch reinforced concrete pipe (RCP) culvert was installed to convey stormwater flow under the Trader Joe's driveway and through Olive Ditch. While the application also proposed mixed-use development on parcels 143-011-08 and 143-011-05, as well as improvements to Olive Avenue (e.g., roadway widening, addition of bike lanes and sidewalks, drainage improvements, and enclosure of Olive Ditch in a pipeline), the application for development of these additional parcels was withdrawn.

The City is proposing to widen Olive Avenue between the Sonoma-Marin Area Rail Transit (SMART) railroad tracks and the east side of Redwood Boulevard, adding turning lanes, and a new widened north-side sidewalk/path for non-motorized bicycles and pedestrians. This widening of the roadway necessitates undergrounding Olive Ditch. As part of the project, the City will also relocate the existing overhead utility lines underground. However, the overhead utility line relocation aspect of the project would terminate at the western SMART right-of-way boundary.

Although development of the property adjacent to this segment of Olive Avenue to the north is likely to occur in the future, with City approval for a new Village of Novato mixed-use site in January 2024, the Project would not provide additional stormwater capacity for future development at this site as the property has its own outfall down-gradient from Olive Avenue. Instead, the project is designed to not exacerbate the flooding impacts caused by the undergrounding of Olive Ditch on the properties along the south side of Olive Avenue by enlarging the proposed culverts and catch basins.

In addition, the City is proposing to mitigate impacts to waters of the State and riparian habitat resulting from the undergrounding of Olive Ditch by conducting riparian habitat enhancements at a 3.34-acre site along Pacheco Creek in the southern portion of the City. Together these components comprise the Olive Avenue Widening Project, hereinafter referred to as "the project," or "the proposed project."

2.1.1 Project Objectives

Project objectives identified by the City include the following:

1. Improve and widen Olive Avenue to:
    a. Add a 10.5 foot-wide multi-use path along the north side of Olive Avenue for pedestrians and bicyclists;
    b. Add a 5 foot-wide Class II bicycle lane along the south side of Olive Avenue for eastbound cyclists;
    c. Add a left turn lane for Olive Avenue westbound traffic turning southbound onto Redwood Blvd. and a two-way center left turn lane the balance of the distance between Redwood Blvd. and the railroad tracks;
    d. Rehabilitate the existing pavement along Olive Avenue;
    e. Improve sight distance approaching the railroad crossing; and
    f. Place existing overhead utilities underground along Olive Avenue between Redwood Boulevard and Railroad Avenue.
    g. Relocate the railroad crossing arm for westbound traffic to accommodate the new sidewalk.
2. Replace approximately 660 feet of stormwater drainage facilities along Olive Avenue (i.e., Olive Ditch) to convey storm flows during 25-year storm events to help alleviate localized flooding and not exacerbate flooding along the southern side of the street.
3. Replace the existing 12-inch storm drain cross-culvert under Olive Avenue with a 4-foot by 2-foot reinforced concrete box culvert to convey 100-year storm flows without impacting existing flood elevations.
4. Enhance habitat quality, functions, and values of the riparian corridor along Pacheco Creek as mitigation for impacts to waters of the State and riparian habitat resulting from construction activities along Olive Avenue.

2.1.2 California Environmental Quality Act Requirements

This project is subject to the requirements of the California Environmental Quality Act (CEQA). The City of Novato Public Works Department is the CEQA lead agency. Prior to deciding to approve the project, the City must identify and document the potentially significant environmental effects of the project in accordance with CEQA. This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared under the direction of the City to fulfill CEQA requirements.

This IS/MND will be circulated for public and agency comment for 30 days. Written comments may be emailed, delivered, or mailed to the following address until close of the comment period:

Petr Skala, Associate Engineer
City of Novato
922 Machin Avenue
Novato, CA 94945
(415) 899-8237
pskala@novato.org

This IS/MND is intended to satisfy the requirements of CEQA (Public Resources Code, Div. 13, §21000-21177), the State CEQA Guidelines (California Code of Regulations, Title 14,

§15000-15387), and the City of Novato Environmental Review Guidelines. CEQA encourages lead agencies and applicants to modify their projects to avoid significant adverse impacts.

Section 15063(d) of the State CEQA Guidelines states the content requirements of an Initial Study as follows:

> *15063(d) Contents. An Initial Study shall contain in brief form:*
>
> *(1) A description of the project including the location of the project;*
>
> *(2) An identification of the environmental setting;*
>
> *(3) An identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries;*
>
> *(4) A discussion of the ways to mitigate the significant effects identified, if any;*
>
> *(5) An examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls;*
>
> (6) *The name of the person or persons who prepared or participated in the Initial Study.*

2.2 Project Location and Existing Conditions

The project would occur within the City of Novato, Marin County, California in two locations:

- The first location includes a segment of Olive Avenue between Redwood Boulevard and Railroad Avenue, hereinafter referred to as the "Olive Avenue Site."
- The second location includes a segment of Pacheco Creek located within a parcel owned by the City of Novato north of Hamilton Parkway and west of Aberdeen Road, adjacent to the Novato Skate Park. This location is hereinafter referred to as the "Habitat Enhancement Site."

These two areas are collectively referred to as the "project sites." The project sites are shown in Figure 1 and are described in further detail below.

2.2.1 Olive Avenue Site

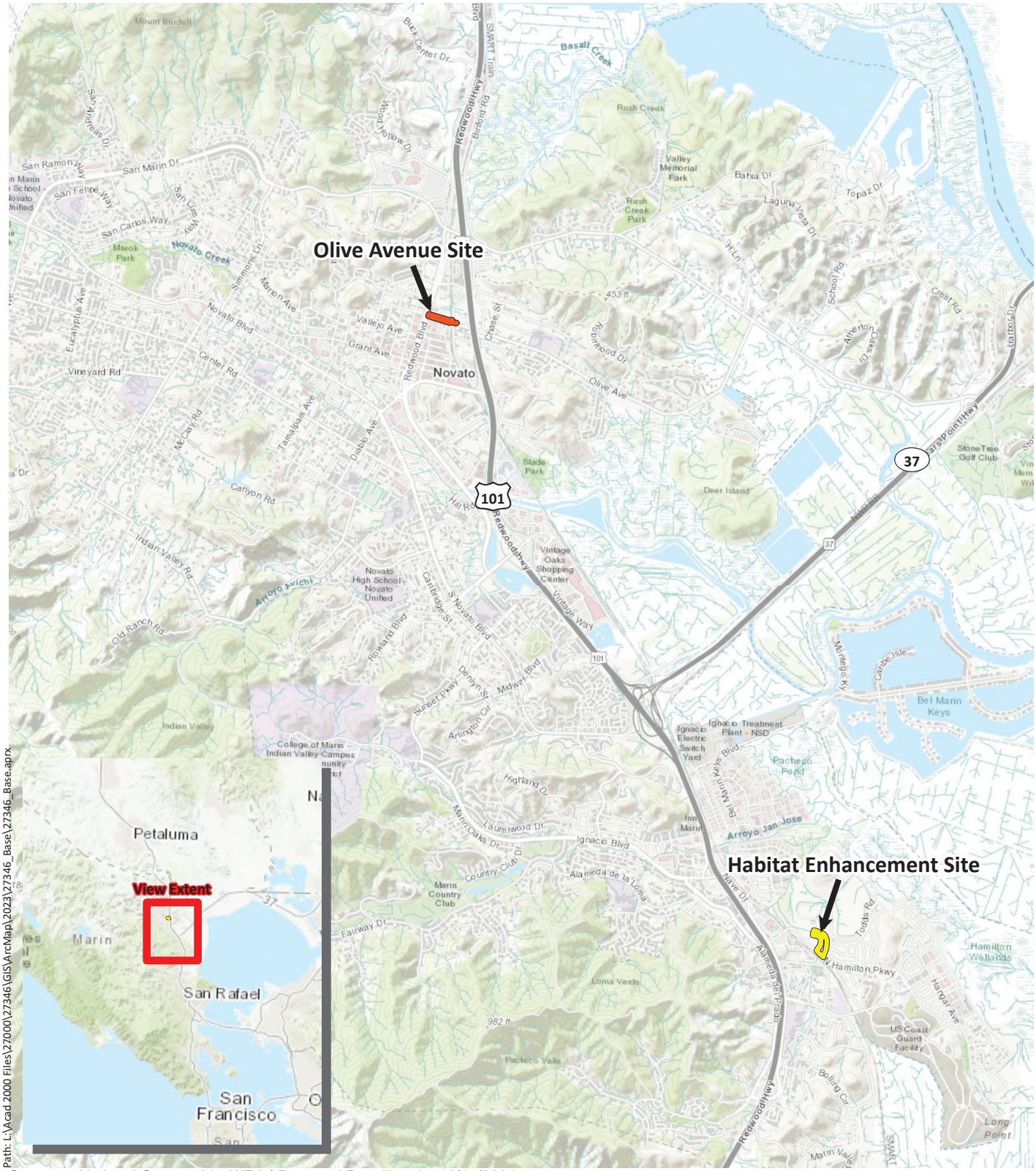
The Olive Avenue Site is along Olive Avenue between Redwood Boulevard and Railroad Avenue (Figure 2). Currently Olive Avenue between Redwood Boulevard and Railroad Avenue is a two-lane major collector roadway with a sidewalk and parking spaces on the south side of the street, no parking or sidewalk on the north side, and no bicycle lanes on either side of the street. An existing driveway on the north side of the street leads into the Trader Joe's shopping center and several driveways lead into various businesses on the south side. Electrical power, cable, and telephone lines run aboveground along Olive Avenue. Existing utilities running underground parallel to Olive Ditch include water, telephone, sanitary sewer, and electrical.

Olive Ditch is an approximately 805-linear-foot unlined and manmade ditch. Approximately 660 linear feet of the ditch is daylighted while approximately 145 linear feet of the ditch is culverted underneath roads, a driveway, and railroad tracks. In a 25-year storm event, Olive Ditch has a peak flow of 50 cubic feet per second (cfs) but overtops its northern bank at 25 cfs (Corps 2003). Upstream (i.e., west) of Redwood Boulevard, the Olive Avenue drainage basin

stormwater conveyance system has been buried up to the intersection of Redwood Boulevard and Olive Avenue, at which point storm flow discharges through a 30-inch by 48-inch elliptical-shaped pipe to Olive Ditch (Corps 2003). Olive Ditch also receives flows from the Trader Joe's parking lot. An elliptical 69-foot long, 38-inch by 60-inch RCP conveys Olive Ditch stormwater flow under the Trader Joe's driveway. A 68-inch by 48-inch elliptical corrugated metal pipe (CMP) conveys flow from Olive Ditch toward the east and under the SMART railroad tracks. An existing 36-inch RCP conveys flows from south to north under Olive Avenue immediately to the west of the SMART railroad track crossing. An existing 4-foot by 10-foot concrete box culvert crosses underneath the SMART railroad tracks approximately 100 feet north of Olive Avenue, connecting the two open ditches on each side of the rail line. Storm flows from the project area eventually drain to Rush Creek to the north.

2.2.2 Habitat Enhancement Site

The Habitat Enhancement Site is within a parcel (Assessor's Parcel Number [APN] 157-180-79) owned by the City north of Hamilton Parkway and west of Aberdeen Road, adjacent to the Novato Skate Park (Figure 3). This site is located approximately five miles southeast of the Olive Avenue Site. The total proposed Enhancement Area is approximately 3.34 acres, including 860 linear feet of Pacheco Creek. Approximately 1.84 acres (582 linear feet) of the Habitat Enhancement Site would be considered mitigation for the project and 0.55 acre (278 linear feet) as mitigation for the proposed Village at Novato project, which is not being evaluated in this IS/MND. The enhancement area is flat with elevation ranging from approximately 17 to 30 feet above sea level. The majority of the Habitat Enhancement Site consists of Pacheco Creek and its associated riparian canopy and understory.



Sources: National Geographic, WRA | Prepared By: gillespie, 10/17/2024

Figure 1. Project Site Regional Location Map

Olive Avenue Widening Project
Novato, California

0 0.5 1 Miles

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Sources: Marin County 2018, WRA | Prepared By: njander, 11/21/2024

Figure 2. Aerial Photograph of the Olive Avenue Site

Olive Avenue Widening Project
Novato, California

0 125 250 Feet

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Sources: Marin County 2018, WRA | Prepared By: njander, 11/29/2023

Figure 3. Aerial Photograph of Habitat Enhancement Site

Olive Avenue Widening Project
Novato, California

0 125 250 Feet

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2.3 Project Components

The project consists of the following components:

- Design and construction of the Olive Avenue roadway widening, Olive Ditch pipeline installation, and Olive Avenue culvert installation;
- Construction of the Olive Avenue utility undergrounding; and
- Habitat enhancement at Pacheco Creek.

Components of the project are described in further detail in the following sections. Preliminary grading and drainage, utility, and striping plans for the Olive Avenue Site are shown in Figures 4, 5, and 6.

2.3.1 Olive Avenue Widening and Olive Ditch Culvert Installation

Olive Avenue would be widened from approximately 40 feet to approximately 80 feet, and improved to accommodate a 10.5 foot sidewalk on the north side of the street, curb and gutter, 8-foot parking lanes along the south side of the street, a 5-foot Class II eastbound bike lane (south side of street), and 11-foot travel lanes on both sides of the street, with a center 11-foot two-way left turn lane (typical widths), as shown on Figure 6. The northern sidewalk would serve as a non-motorized pathway for both bicyclists and pedestrians. The new sidewalks and bicycle lanes would be extended through the SMART crossing and Railroad Avenue intersections, connecting to existing pedestrian and bicycle facilities.

The crown elevation of the existing roadway (in the vicinity of the road's low-lying segment) would be no higher than under existing conditions, however, the roadway (as it approaches the SMART crossing) would be elevated to improve sight distance at the SMART railroad crossing. No parking spaces are proposed on the north side of the finished street while parking on the south side would remain the same as under existing conditions. One new driveway is proposed along the north side of Olive Avenue into the undeveloped commercial property east of Trader Joe's (APN 143-011-08). This undeveloped commercial property may be developed in the future, but no development of said parcel is included in the proposed project. The existing median curb in Olive Avenue west of the railroad crossing would remain. A raised traffic control island would be installed at the new driveway to direct turn movements, as also shown on Figure 6.

The Olive Avenue sidewalk, curb, and gutter would be extended east across the railroad corridor through the intersection of Olive Avenue and Railroad Avenue, to provide a connection between the existing sidewalk to the east and the proposed improvements. The railroad crossing surface, which consists of concrete panels, would also be widened to ensure consistency with the widened roadway. Two custom headwalls and/or junction boxes would be constructed along the north side of Olive Avenue, one on each side of the railroad crossing above the two existing drainage ditches. These headwalls and/or junction boxes would support the widened sidewalk.

On the south side of Olive Avenue, three existing inlets would be reconstructed within approximately 150 feet west of the SMART crossing to receive flow from the two existing culverts; the inlets will connect to the box culvert on the north side of Olive Avenue. Once the roadway widening work is complete, the road would be repaved. The rail crossing would be installed in conformance with California Public Utilities Commission General Order 88-B, 72-B, and 75-D for at-grade railroad crossings.

Olive Ditch would be enclosed into an approximately 650-foot-long, 5-foot by 3-foot reinforced concrete box culvert extending from Redwood Boulevard before expanding to a double 6-foot by 3-foot reinforced concrete box culvert 140 feet west of the railroad. In addition to the upstream runoff from west of Redwood Boulevard, project area runoff would enter the double 5-foot by 3-foot culverts as well as the 6-foot by 3-foot culverts via seven grate openings of approximately 3 feet by 4 feet in area, each embedded in the top of the new box culverts. The southern edge of Olive Avenue contains an additional three grate openings that will empty into a new 4-foot by 2-foot reinforced concrete box culvert 168 feet to the west of the railroad centerline. This 4-foot by 2-foot culvert crosses perpendicular to Olive Avenue and would drain into the project's double 6-foot by 3-foot culverts. The existing 36-inch diameter RCP passing under Olive Avenue just west of the railroad crossing will be retained and extended to pass under the widened roadway.

The proposed configuration of the culverts is shown on Figure 5. On the west end, the project culvert would connect to the existing pipeline under Redwood Boulevard. On the east end, the project's culverts would terminate at the railroad corridor into a ditch, a portion of which is concrete armored, west of the railroad tracks and north of Olive Avenue. The existing 38-inch by 60-inch culvert under the Trader Joe's driveway would be replaced as part of the installation of the box culvert. New drainage inlets located along Olive Avenue would be connected to the new box culverts. The new box culverts would be designed to convey flow from a 25-year storm event, including any new flow that may result from the widening of Olive Avenue.

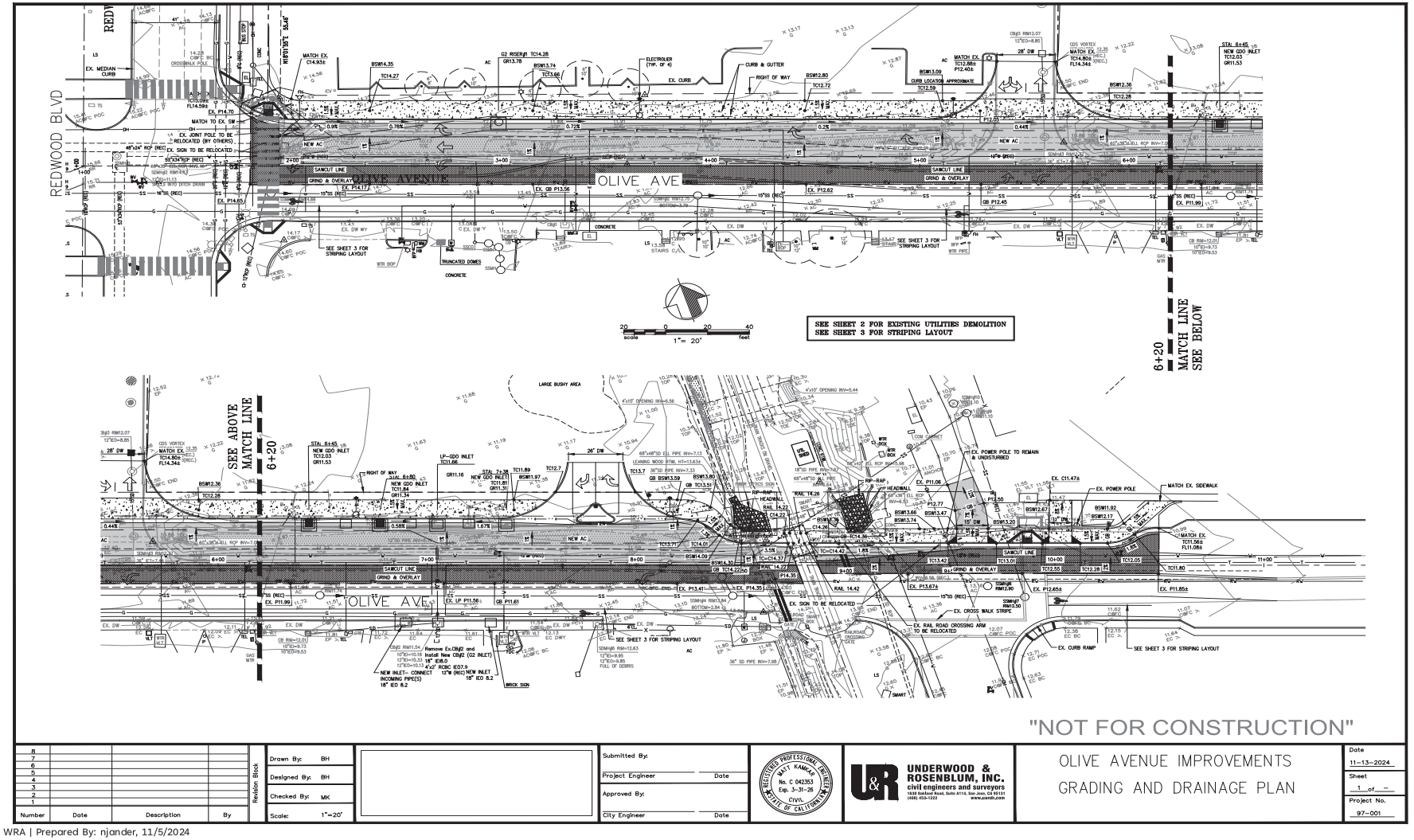
Under the proposed project, improvements to Olive Avenue, the Olive Ditch pipeline installation, and Olive Avenue culvert installation would result in approximately 0.67 acres of new impervious surface (1.22 acres for new and resurfaced existing impervious surfaces combined). This project component would mostly occur within the City's right-of-way but would require an encroachment permit from SMART for the railroad crossing.

2.3.2 Olive Avenue Utility Undergrounding

This project component consists of undergrounding existing Pacific Gas & Electric (PG&E) electrical power infrastructure, Comcast cable, and Verizon phone lines along Olive Avenue between Redwood Boulevard and the SMART railroad tracks into an approximately 633-foot-long joint utility trench on the north side of Olive Avenue under and behind the proposed sidewalk, as shown on Figure 5.

Most of the utility undergrounding would be installed via open trench construction methods. Typically, the joint trench would be approximately 36 inches wide and four to five feet deep and would contain multiple conduits, including for Comcast, PG&E, and Verizon. The trench would be backfilled with native material to a compaction of 90 percent. Because the trench would not go under the SMART tracks, a new joint utility pole would be installed to enable the future option of extending the utilities overhead across the SMART railroad corridor as part of another project to connect them to an existing PG&E vault in Railroad Avenue.

Construction would also include installation of several subsurface junction boxes, vaults, and associated appurtenances for the various utilities. These subsurface enclosures would range from approximately four to seven feet deep. All work would occur within the City's right-of-way. The utility undergrounding project component would result in a marginal increase in impervious surface and would resurface approximately 210 square feet of existing impervious surfaces.



Path: L:\Acad 2000 Files\27000\27346\GIS\ArcMap\2023\27346_Base\27346_Base.aprx Layout Name: Figure 1-4 Olive Avenue Site Plans (1 of 3) Drainage and Grading

Sources WRA | Prepared By: njander, 11/5/2024

Figure 4. Olive Avenue Site Plans (1 of 3) Drainage and Grading

Olive Avenue Widening Project
Novato, California

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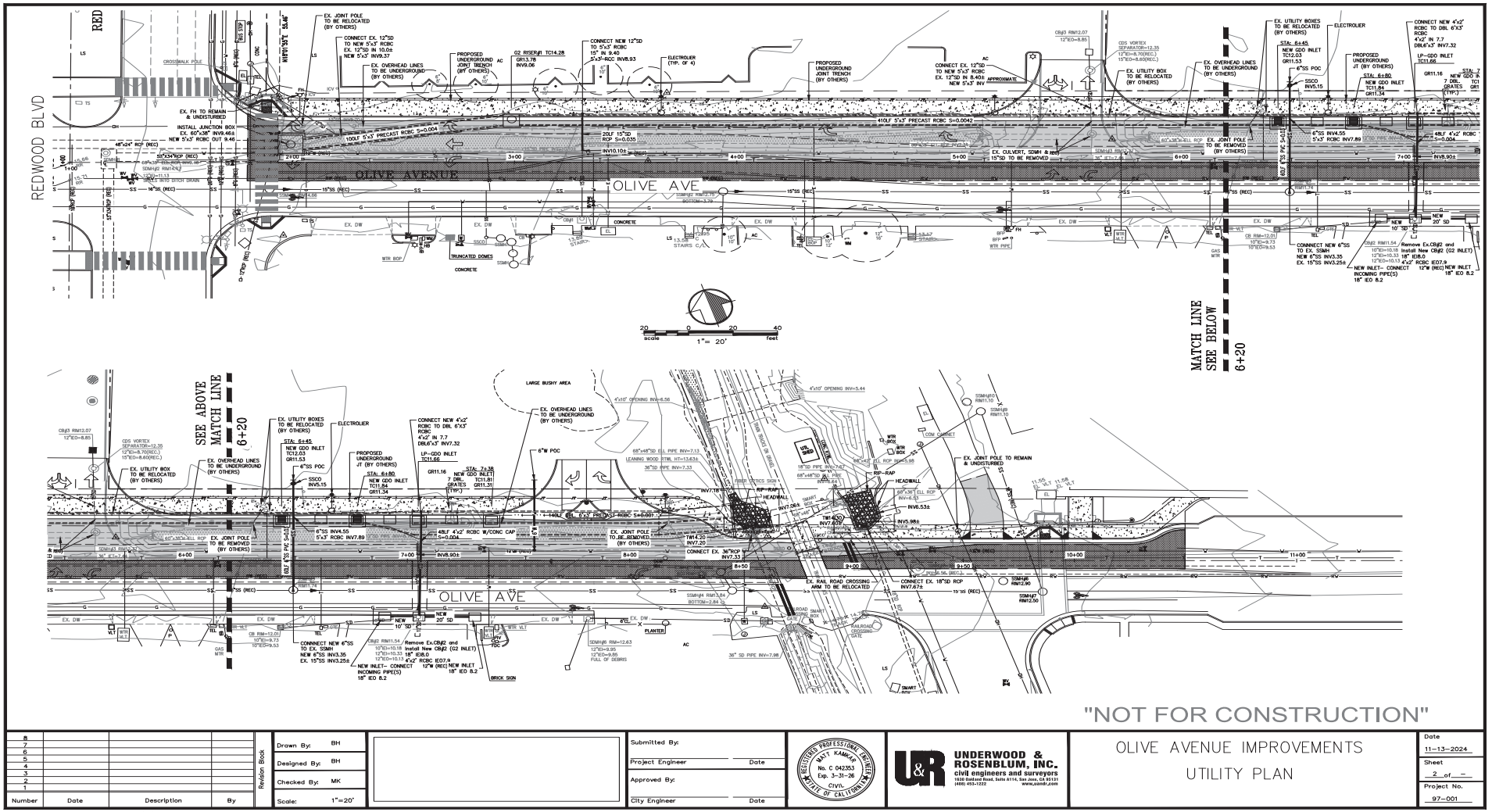

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Revision Block

Drawn By: BH
Designed By: BH
Checked By: MK
Scale: 1"=20'

Submitted By:
Project Engineer Date
Approved By:
City Engineer Date

REGISTERED PROFESSIONAL ENGINEER MATT KAMKAR No. C 042353 Exp. 3-31-26 CIVIL STATE OF CALIFORNIA

UNDERWOOD & ROSENBLUM, INC.
civil engineers and surveyors
1030 Gaddard Road, Suite 4114, San Jose, CA 95131
(408) 453-1222
www.uandr.com

OLIVE AVENUE IMPROVEMENTS
UTILITY PLAN

Date 11-13-2024
Sheet 2 of —
Project No. 97-001

Path: L:\Acad 2000 Files\27000\27346\GIS\ArcMap\2023\27346_Base\27346_Base.aprx Layout Name: Figure 1-5. Olive Avenue Site Plans (2 of 3) Utilities

Sources WRA | Prepared By: njander, 11/5/2024

Figure 5. Olive Avenue Site Plans (2 of 3) Utilities

Olive Avenue Widening Project
Novato, California

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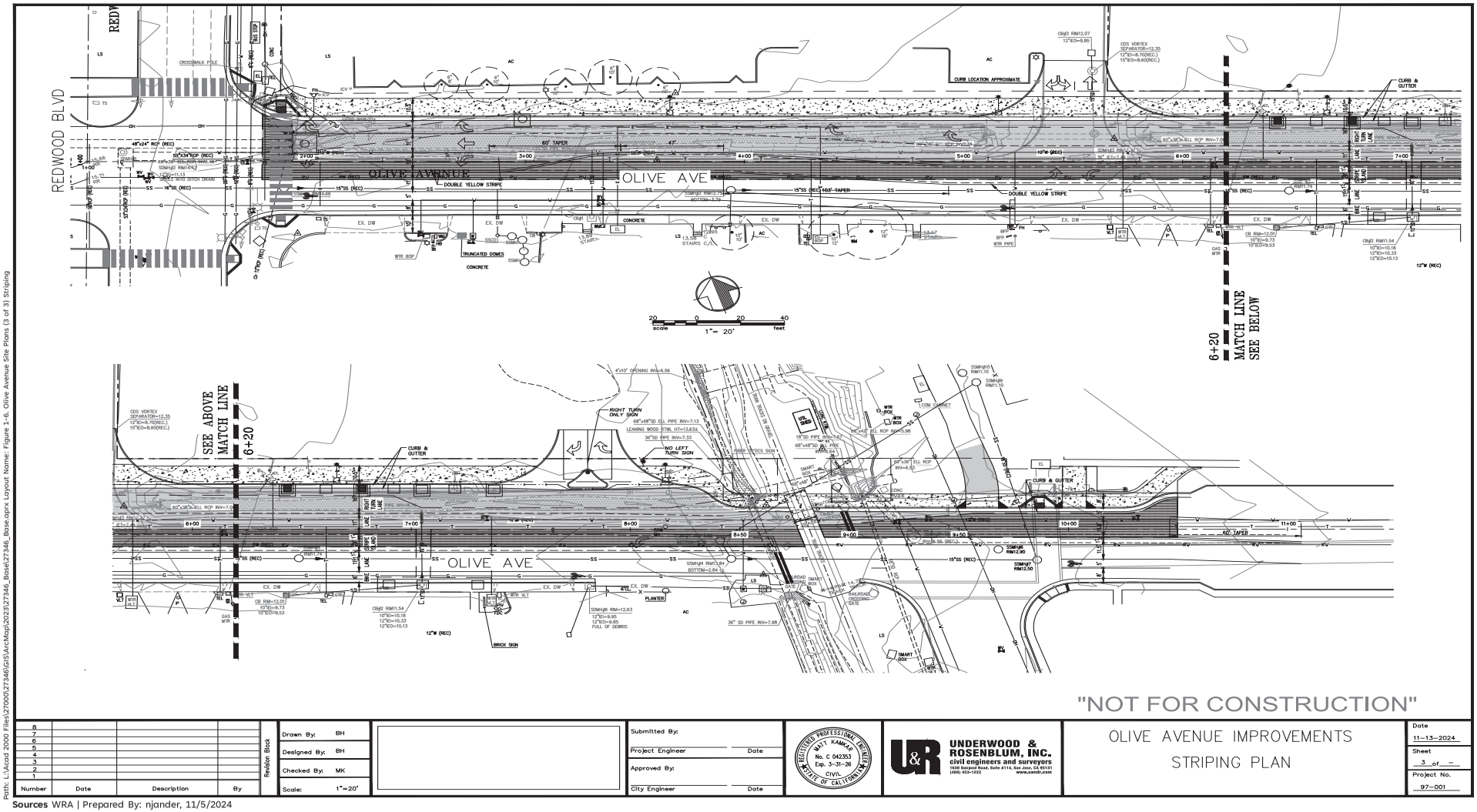

Path: L:\Acad 2000 Files\27000\27346\GIS\ArcMap\2023\27346_Base\27346_Base_aprx Layout Name: Figure 1-6. Olive Avenue Site Plans (3 of 3) Striping

Sources WRA | Prepared By: njander, 11/5/2024

Figure 6. Olive Avenue Site Plans (3 of 3) Striping

Olive Avenue Widening Project
Novato, California

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2.3.3 Pacheco Creek Riparian Enhancement

Riparian habitat enhancement activities at the Habitat Enhancement Site would focus on weed management and planting of native riparian species within the Pacheco Creek riparian enhancement area. Riparian enhancement planting areas are shown in Figure 7. The first year of the project would focus on the complete removal or treatment of target invasive plant species, as well as protecting existing native plants and promoting the natural recruitment and establishment of additional native plants. Invasive weeds targeted for removal include silver wattle (*Acacia dealbata*), pampas grass (*Cortaderia selloana*), fennel (*Foeniculum vulgare*), French broom (*Genista monspessulana*), English ivy (*Hedera helix*), Canary Island date palm (*Phoenix canariensis*), and Himalayan blackberry. Weeds would be managed using a combination of manual and mechanical removal and selective herbicide application (spot treatments and cut-stem applications). Cut and removed biomass would be properly disposed of at a green waste facility. Substantial regrowth and germination of non-native seed bank would be expected the first growing season after initial weed treatment; therefore, the second year and beyond would involve follow up removal and treatments. All tree and large vegetation removal scheduled for the first year would be conducted outside of the bird nesting and bat roosting season (i.e., work would occur between November 1 and January 31).

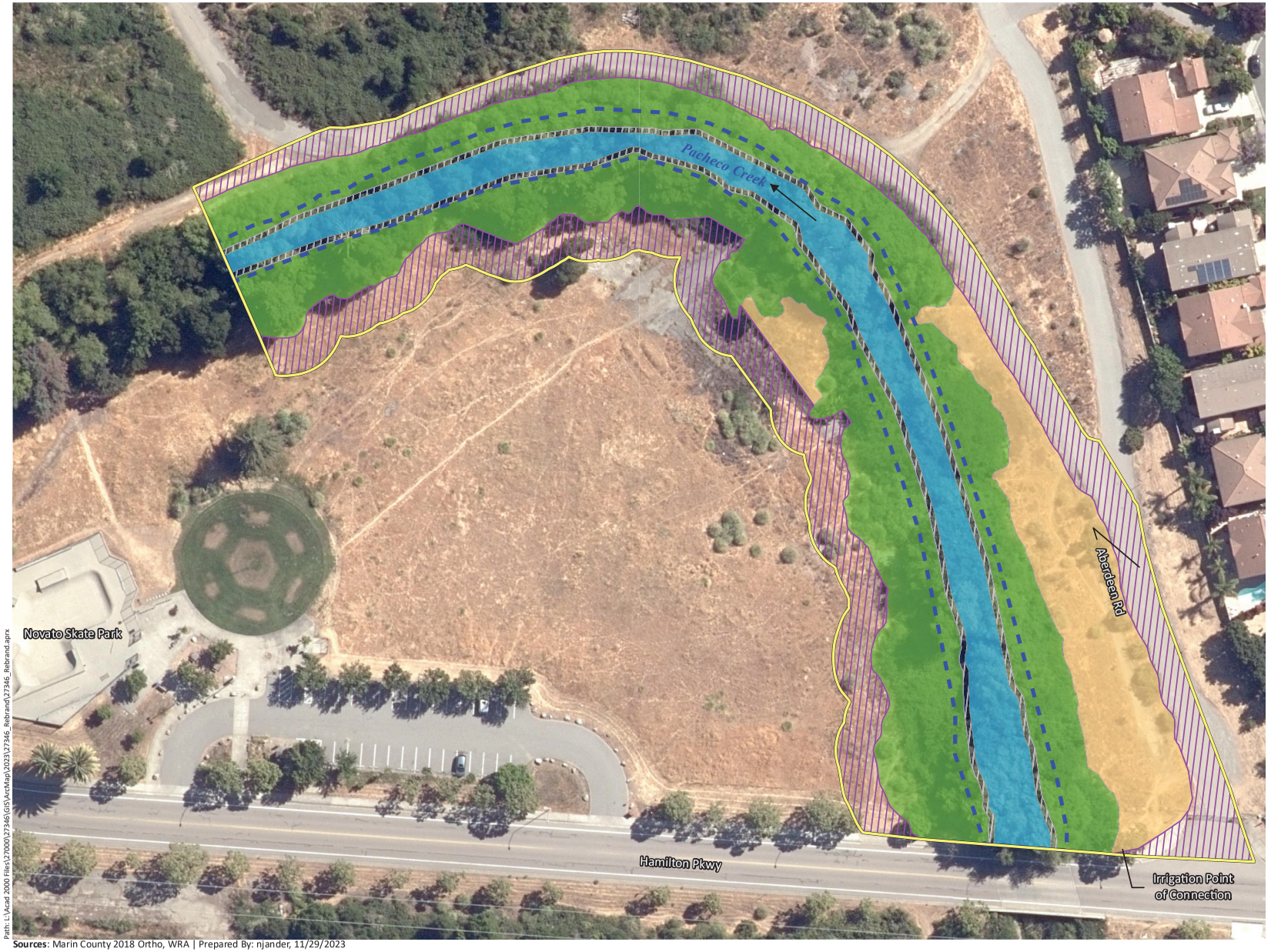
Approximately 90 riparian trees and 1,400 riparian shrubs and woody vines would be planted to enhance and extend the riparian canopy. To allow for intensive weed abatement for two growing seasons, planting would not be initiated until fall or winter of the second year of the project. Planting in the riparian understory would focus on planting understory species to enhance the existing established mature native riparian canopy which is to be preserved. Planting in the outer riparian areas would include riparian tree and shrub species to expand the riparian canopy. The plant material type, size, and spacing have been designed to encourage quick establishment of native riparian species and to discourage colonization by non-native, invasive plant species. All native plantings would be sourced from regional nurseries implementing best management practices to avoid and minimize the spread of harmful pathogens such as Phytophthora. Planting would occur in late fall, if possible, to take advantage of seasonal rains and improve conditions for plant establishment, after two growing seasons of target invasive plant removal have occurred. A minimum of two inches of mulch would be placed in planting basins to retain soil moisture.

When supplemental watering is required to establish and maintain plant growth to meet success criteria, irrigation would be done in the most water efficient manner possible, such as hand watering or temporary drip irrigation. If required, the temporary drip irrigation system would be installed prior to plant installation. Trees planted within the outer riparian planting area would be protected from browsing by installing protective cages around them. Additional browse protection could be installed if monitoring and inspections indicate that the growth and vigor of other plantings would benefit.

Annual monitoring of the riparian plantings would be conducted for five years by biologists or restoration specialists experienced in the identification and ecology of locally native riparian plants as well as invasive plants common to Northern California. Maintenance would be conducted by a restoration contractor with demonstrated experience in installing and maintaining California native plantings as well as in treating and managing invasive plants species common to riparian settings in Northern California.

Figure 7.
Riparian Enhancement Planting Areas

Olive Avenue Widening Project
Novato, California



- Habitat Enhancement Site (3.34 ac)
- Top of Bank
- Equipment Access
- Concrete Apron
- Channel Below OHWM

Riparian Planting Areas

- Riparian Understory Planting Area (1.36 ac)
- Outer Riparian Planting Area (0.44 ac)

N

0 50 100
Feet

wra
Environmental Consultants

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Sources: Marin County 2018 Ortho, WRA | Prepared By: njander, 11/29/2023

2.4 Project Construction

2.4.1 Olive Avenue Site

Construction of the proposed improvements at the Olive Avenue Site would take approximately eight months to complete, including four months for joint trench utilities work and five months for culvert installation and roadway widening. One of the months would involve work on both aspects of the project simultaneously. Construction activities within the banks of the drainage ditch would be performed between June 15 and October 15 when the channel would be dryest. Typical daily construction hours would be in conformance with Novato Municipal Code, Section 19.22.070; and may occur between 7:00 a.m. and 6:00 p.m. on weekdays, and between 10:00 a.m. and 5:00 p.m. on Saturdays.

Most of the construction activities would be located within the City's right-of-way; however, some work would be required within the SMART right-of-way (e.g., roadway widening). Because the rail corridor would be active for passenger and freight train service during the construction period, construction work windows and agreements would require coordination with SMART to minimize conflicts. The City would obtain an encroachment permit from SMART for work within their right-of-way.

CONSTRUCTION ZONE, ACCESS, AND STAGING AREAS

The construction disturbance area would be approximately 0.97 acres. During construction, worker vehicles and haul trucks would access the Olive Avenue Site from U.S. Highway 101 and local City streets, including Olive Avenue and Redwood Boulevard. Staging of construction equipment and materials is anticipated to occur within the Olive Avenue Site boundary.

PEDESTRIAN ACCESS AND TRAFFIC DETOURS

Partial lane closures would be required along Olive Avenue between Redwood Boulevard and Railroad Avenue during construction. During construction, parking along Olive Avenue within the site boundary would be unavailable. The existing sidewalk on the southern side of Olive Avenue would remain open to pedestrian access during most of construction. Local businesses on the south side of Olive Avenue would utilize access points along Mulligan Lane when possible. Trader Joe's and other shopping center traffic would remain accessible via the driveway at Redwood Boulevard. Access to businesses in the project construction area would always be maintained during business hours.

DEWATERING

Construction activities within the drainage ditch would be performed between June 15 and October 15, which would correspond to times when there is little or no precipitation and when flow would be lowest (or absent). If flowing water is present in the ditch, the flow would be diverted by placing coffer dams upstream and downstream of the active construction areas using sandbags and directing flow through a pipe to discharge downstream of the Olive Avenue Site. The face of the sandbag coffer dams would be lined with 10-millimeter poly sheeting to prevent seepage.

Because the ditch is relatively flat, bypass flows would be piped around the construction areas by pumping using a 50 horsepower, noise-attenuated diesel-powered pump or an electric sump pump with a diesel generator staged away from the ditch.

The length of the bypass pipe would be the minimum necessary to safely convey the flow through the construction site and would be placed in the bed of the ditch at natural grade. Diverted flows would be returned to the ditch immediately downstream of the work area. Once any upstream flow is diverted, any standing water within the construction area would be pumped out of the ditch and discharged nearby (e.g., undeveloped commercial parcel, Railroad Ditch north of Olive Avenue) to the ground to allow for infiltration into the ground, or the local storm drain system. After construction, the diversion pipe and coffer dam material would be removed from the channel and areas of the channel not scheduled for pipeline installation would be restored to pre-construction condition.

Groundwater dewatering may also be required to provide a dry work area if groundwater is encountered during excavation activities, as groundwater depths in the Olive Avenue Site area are estimated at 3 to 7 feet below ground surface, which corresponds with the depths of trenching and excavation for the project. Temporary groundwater dewatering would involve the pumping of groundwater in a localized area to lower the water level to just below the bottom of the excavation. Any groundwater encountered would be held in a Baker tank or a similar water storage system and allowed to infiltrate into the ground or discharged in the local storm drain system.

All discharges would be performed in conformance with San Francisco Bay Regional Water Quality Control Board (RWQCB) and applicable local discharge requirements.

TREE PROTECTION, REVEGETATION, AND SITE RESTORATION

Tree removal is not anticipated for this project, as there are no trees along Olive Ditch, and the one street tree along the south side of Olive Avenue would remain and be protected during construction. During construction of the Olive Avenue widening, root protective fabric would be installed prior to installation of new concrete to protect existing street and landscaping trees.

Clearing and grubbing would be required prior to utility undergrounding, pipeline and culvert installation, and roadway widening. Following completion of construction, any areas within the construction zone altered by construction activities would be restored to at or near pre-construction conditions. Pavement over disturbed areas would be replaced, and soil would be revegetated with hydroseeding.

JOINT UTILITY TRENCH CONSTRUCTION

Most of the joint utility trench would be constructed using open trench construction. The open trench construction method involves clearing the ground of vegetation within the work area; grading or pavement cutting; excavation and potential shoring of the trench; installation of the pipe bedding, pipeline, valves, and appurtenances; backfilling of the trench; and restoration of the ground surface.

Installation of underground utilities would require an 11-foot-wide (at base) trench to accommodate the proposed 5-by-3-foot box culvert and a 19-foot-wide (at the base) trench to accommodate the proposed double 6-by-3-foot box culvert. Dewatering of the trench would be required in areas where groundwater is encountered (as described in the Dewatering Section above). Once the trench is excavated, shored (if necessary), and dewatered (if necessary), bedding material would be placed in the bottom of the trench, and the conduit sections would

be installed or cast-in-place. Native material would be reused to backfill the trench where feasible. Engineered aggregate base material would also be used for backfilling. Following compaction, the work surface area would be restored to its pre-construction or close to pre-construction condition.

UTILITY DISRUPTION

The City would notify affected utility service providers in advance of utility undergrounding (and other ground-disturbing construction activities, as necessary) and coordinate with the appropriate utility service provider to plan for any temporary utility service disruption. No utility disruption or relocation is anticipated beyond the utility undergrounding work included in the project.

PIPELINE AND CULVERT INSTALLATION

To install the Olive Ditch culverts, the drainage ditch would be cleared of vegetation and graded for level placement of the culverts. The box culverts will be cast-in-place or 5- or 6-foot pre-cast concrete sections would be placed into the drainage ditch using a small crane. Once the box culverts are constructed, the ditch would be backfilled with native soil or engineered material, graded to conform to the new roadway surface, and paved.

2.4.2 Habitat Enhancement Site

Riparian habitat enhancement activities would occur during the first and second years of the project and are shown on Figure 7. Enhancement activities are discussed above in *Section 2.2.3, Pacheco Creek Riparian Enhancement*. Site preparation, staging, and access are discussed in the following sections.

SITE PREPARATION

Improvements at the Pacheco Creek riparian enhancement area would focus on removal of debris and trash from the Pacheco Creek channel. No planting would occur within the concrete-lined channel. The concrete-lined channel itself must remain intact due to known soil contamination in the area. Himalayan blackberry that trails into the concrete channel would be trimmed using string trimmers, if necessary for site preparation.

Riparian understory occurs on both sides of the concrete channel, just above top-of-bank. Care would be taken to protect and preserve native shrubs and trees within the riparian understory and canopy, although some trimming may be necessary to remove Himalayan blackberry growing in the canopy.

STAGING AND ACCESS

Equipment staging for work at the Habitat Enhancement Site would occur in the parking lot of the Novato Skate Park, located at 1200 Hamilton Parkway. Equipment access on the east side of Pacheco Creek would occur via a paved access road located at the edge of the riparian canopy. Equipment access on the west side of Pacheco Creek will be limited to a 25-foot-wide zone beyond the riparian canopy.

2.4.3 Hauling of Demolition Debris, Excavated Soil, and Construction Equipment and Materials

The number of construction-related vehicles traveling to and from the project sites would vary on a daily basis. The estimated haul trips for removed vegetation, demolition debris, excavated soil, and construction equipment and materials are summarized below in Table 1.

Table 1. Estimated Haul Volumes and Truck Trips

PROJECT COMPONENT	HAUL VOLUME (CUBIC YARDS [CY])	ESTIMATED HAUL TRUCK TRIPS (ONE-WAY)
Joint Trench Utilities	300 (export)	30[b]
Olive Avenue Widening	1,500 (import)	150[b]
Pacheco Creek Habitat Enhancement	700[a]	44[c]

[a.] Approximately 0.43 acres of non-native plants would be removed. The haul volume is based on the assumption that the non-native plants would be 1 foot tall with a total volume of 0.43 acre-foot (approximately 700 CY).
[b.] The haul truck trips were estimated based on the assumption that each truck can carry 10 CY of earth and road base material.
[c.] The haul truck trips were estimated based on the assumption that each truck can carry 16 CY of plant materials. It is possible that the removed non-native plants would be composted on-site.

2.4.4 Construction Workers and Equipment

The estimated size of the construction workforce at any one time during construction is anticipated to range between 10 to 20 workers per day. Generally, construction equipment required to construct the project would include the following:

- On-road hauling truck (8)
- Large excavator (2)
- Medium-sized front loader (2)
- Water truck (1)
- Sweeper (1)
- Traffic control message boards (2)
- Sheep's foot compactor (1)
- Smooth drum roller (1)
- Backhoe (small) (1)
- Paving machine (1)
- Paving roller (2)

2.5 Project Measures

2.5.1 Project Measure 1 – Implement Air Quality Control Measures during Construction

The proposed project will include the following Bay Area Air Quality Management District (BAAQMD) recommended Basic Construction Measures in contract specifications to limit dust, criteria pollutants, and precursor emissions associated with construction:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) will be watered two times per day;
- All haul trucks transporting soil, sand, or other loose material off-site will be covered;
- All visible mud or dirt tracked out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping will be prohibited;

- All vehicle speeds on unpaved areas will be limited to 15 miles per hour;
- All paving will be completed as soon as possible after work is finished;
- Engine idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage will be provided for construction workers at all access points;
- All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications, and/or certified by California Air Resources Board (CARB) for on- and off-road diesel engines. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation; and
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person will respond and take corrective action within 48 hours. The Air District's phone number will also be visible to ensure compliance with applicable regulations.

2.6 City Entitlements and Other Public Agency Approval

Construction and operation of the project would be conducted to meet applicable regulations. Table 2 lists the federal, State, and local regulatory/permitting agencies that may have permitting or approval authority over certain aspects of the project.

Table 2. Potential Approval or Permit Required

AGENCY	POTENTIAL APPROVAL OR PERMIT REQUIRED
FEDERAL	
U.S. Army Corps of Engineers	On March 19, 2025, the Corps issued an Approved Jurisdictional Determination pursuant to Section 404 of the Clean Water Act for the Olive Avenue Widening Project verifying that there are no jurisdictional waters of the U.S. at the project site and that no Corps permit is required to implement the project as proposed.
STATE	
San Francisco Bay Regional Water Quality Control Board	Report of Waste Discharge pursuant to California Water Code Section 13260 for work within the channel and banks of Olive Ditch and Pacheco Creek
California Department of Fish and Wildlife	Section 1602 Lake or Streambed Alteration Agreement, pursuant to the Fish and Game Code, for work within the channel and banks of Olive Ditch and within the riparian corridor of Pacheco Creek
State Water Resources Control Board	General Construction Permit, as required for projects that disturb one or more acres
California Public Utilities Commission	General Order 88-B to modify existing railroad crossing
LOCAL	
SMART	Encroachment permit for work within the SMART right-of-way
City of Novato	Building Permit and Grading Permit

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is potentially significant unless mitigation is incorporated, as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Public Services
☐ Agricultural Resources	☐ Hazards and Hazardous Materials	☐ Recreation
☒ Air Quality	☒ Hydrology and Water Quality	☒ Transportation
☒ Biological Resources	☐ Land Use/Planning	☒ Tribal Cultural Resources
☒ Cultural Resources	☐ Mineral Resources	☐ Utilities / Service Systems
☐ Energy	☐ Noise	☐ Wildfire
☐ Geology and Soils	☐ Population and Housing	☒ Mandatory Findings of Significance

3.1 Determination

On the basis of this initial evaluation:

☐ I find that the project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the Project MAY have a "Potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

May 29, 2025

Signature **Date**

Name and Title: Petr Skala, Associate Engineer

3.2 Initial Study Checklist

This section describes the existing environmental conditions in and near the project sites and evaluates environmental impacts associated with the proposed project. The environmental checklist, as recommended in Appendix G of the CEQA Guidelines, was used to identify environmental impacts that could occur if the proposed project is implemented.
Each of the environmental categories was fully evaluated, and one of the following four determinations was made for each checklist question:

"No Impact" means that no impact to the resource would occur as a result of implementing the Project.

"Less than Significant Impact" means that implementation of the Project would not result in a substantial and/or adverse change to the resource, and no mitigation measures are required.

"Less than Significant with Mitigation Incorporated" means that the incorporation of one or more mitigation measures is necessary to reduce the impact from potentially significant to less than significant.

"Potentially Significant Impact" means that there is either substantial evidence that a Project-related effect may be significant, or, due to a lack of existing information, could have the potential to be significant.

Mitigation measures have been incorporated to avoid and minimize potentially significant impacts. Mitigation Measures are numbered with the abbreviation for the CEQA Appendix G topic that they are prescribed for, and a number. Because this project includes two primary project sites, the Olive Avenue Site and the Habitat Enhancement Site, some mitigation measures will apply at only one of the sites, or both. The text in the mitigation measures themselves identifies at which site the measure shall apply.

3.2.1 Aesthetics

Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Olive Avenue is a two-lane major collector roadway and has no specific General Plan or zoning designation. Areas adjacent to Olive Avenue and surrounding areas have a General Plan land use designation of General Commercial (CG) and Mixed Use (MU) and a zoning classification of General Commercial (CG) and Mixed Use (MU) (City of Novato 2024). Additionally, the area is within the Downtown (D) Overlay district, and portions are within the Affordable Housing Opportunity (AHO) Overlay district. The Habitat Enhancement Site is zoned as Open Space and is surrounded by lands zoned as Parkland (P) and Medium Density Residential (R5).

DISCUSSION OF IMPACTS

a) Have a substantial adverse effect on a scenic vista?

No Impact

The Olive Avenue Site is located in an urban area developed with commercial, industrial, and residential uses. The Olive Avenue Site and the surrounding area are predominately flat and urbanized, and mid- and long-range views are limited. Work within the Olive Avenue Site would consist of at-grade and subsurface improvements and would not construct new buildings or structures.

The Habitat Enhancement Area Site is located approximately five miles southeast of the Olive Avenue Site. The Habitat Enhancement Site is surrounded by open space, the Novato Skate Park,

and single-family residences. The Habitat Enhancement Site consists of Pacheco Creek and its associated riparian canopy and understory. Work within the Habitat Enhancement Site would focus on weed management and planting of native riparian species.

The project sites are not located within a designated scenic resource identified in the City's General Plan (City of Novato 2020a). The project would not include construction of new buildings or structures that would obstruct existing vistas. No impact would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact

There are no officially designated State scenic highways in Marin County (Caltrans 2024). Segments of Highway 37 and Highway 101 in Marin County are listed as "eligible" for designation as scenic highways; however, the project sites are not visible from these segments. No impact would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less-than-Significant Impact

Based on Public Resources Code Section 21071, the City of Novato is not considered an *Urbanized Area*. The proposed Olive Avenue improvements are at-grade or underground and would include the undergrounding of existing aboveground utilities. The improvements would alter the visual character of the area, but are not considered to degrade the existing visual character or quality of public views of the site and its surroundings. The impact would be less than significant.

The proposed Habitat Enhancement Site would remove invasive and non-native plant species from the site and include the planting of native plants at the site. The removal of invasive and non-native plants and inclusion of new native plants would alter the visual character of the site, but the proposed improvements are not considered a degradation of the visual character of quality of public views. While proposed improvements at the Habitat Enhancement Site would result in some change in the site, the work would ultimately result in a more harmonious natural area due to the integration of native vegetation and removal of invasive species. Therefore, the long-term impact would be beneficial. No impact would occur.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact

The Olive Avenue Site is in an area with existing exterior light sources, including parking lot lights, street lights, and traffic lights, and exterior building lights. The Habitat Enhancement Site does not have any lights within the project area. There are streetlights along Hamilton Parkway, and within the Skate Park parking lot.

Construction Impacts

As stated in *Section 2.0, Project Description*, typical daily constitution hours would be between 7:00 a.m. and 6:00 p.m. during weekdays, and between 10:00 a.m. and 5:00 p.m. on Saturdays.

Therefore, construction activities would not result in a source of substantial light or glare that would adversely affect nighttime views in the areas. No impact related to light and glare would occur during construction.

Operational Impacts

Following construction, project activities at the Olive Avenue Site would not include new sources of daytime glare or change nighttime lighting and illumination levels in the areas. With the undergrounding of utility poles, existing streetlights that are mounted to the utility poles would be removed. Five new streetlights are proposed. Since there are existing light sources in and around the project site, the replacement of existing streetlights with new street lights would not introduce new sources of light to an unlit area. No new light sources are proposed at the Habitat Enhancement Site. No impact would occur.

3.2.2 Agricultural and Forestry Resources

Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The project sites are mapped as Urban and Built-Up Land by the California Important Farmland Finder database prepared by the California Department of Conservation (CDOC) (CDOC 2024).

DISCUSSION OF IMPACTS

a-e) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? Conflict with existing zoning for agricultural use, or a? Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland(as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? Result in a loss of forest land or conversion of forest land to non-forest use? Involve other changes in the existing environment which, due to their location or nature, could result in

conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact

The project sites are not designated by the Farmland Mapping and Monitoring Program as Prime Farmland, Unique Farmland, or Farmland of State Importance (Farmland) (CDOC 2024). The project sites are categorized as “Urban and Built-Up Land” (CDOC 2024). Therefore, the project would not convert Farmland to non-agricultural use. Olive Avenue is a two-lane major collector roadway and has no specific General Plan or zoning designation. Olive Ditch Area is designated as General Commercial. The Habitat Enhancement Site zoned as Planned District. The project sites are not zoned as forest land, timberland, or timberland zoned for timberland production. The project would have no impact related to agriculture and forestry resources. No impact would occur.

3.2.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d)	Result in other emissions (such as those leading to odors) affecting a substantial number of people?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Environmental Setting

The project sites are located in Marin County, which is in the San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District (BAAQMD) is the regional agency tasked with managing air quality in the region. At the State level, the California Air Resources Board (CARB), a part of the California Environmental Protection Agency, oversees regional air district activities and regulates air quality at the State level. The BAAQMD has published the CEQA Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of the project. The 2017 Clean Air Plan (CAP) is the most current air quality management plan developed and adopted by BAAQMD.

Ambient Air Quality and Climate

The Bay Area has a Mediterranean climate characterized by wet winters and dry summers. During the summer, a high-pressure cell centered over the northeastern Pacific Ocean results in stable meteorological conditions and a steady northwesterly wind flow that generally keeps storms from affecting the California coast. During the winter, the Pacific high-pressure cell weakens, resulting in increased precipitation and the occurrence of storms. The highest air pollutant concentrations in the Bay Area generally occur during inversions, when a surface layer of cooler air becomes trapped beneath a layer of warmer air. An inversion reduces the amount of vertical mixing and dilution of air pollutants in the cooler air near the surface.

Air Pollutants of Concern

CARB and U.S. Environmental Protection Agency (EPA) focus on the following air pollutants as regional indicators of ambient air quality:

- Ozone
- Coarse particulate matter (PM10)
- Fine particulate matter (PM2.5)
- Nitrogen dioxide
- Carbon monoxide
- Sulfur dioxide
- Lead

Because these are the most prevalent air pollutants known to be harmful to human health based on extensive criteria documents, they are referred to as "criteria air pollutants." In the SFBAAB, the primary criteria air pollutants of concern are ground-level ozone formed through reactions of oxides of nitrogen oxides (NOx) and reactive organic gases (ROG), PM10, and PM2.5. Regional air pollutants, such as ozone, PM10, and PM2.5, can be formed and/or transported over long distances and affect ambient air quality far from the emissions source. The magnitude and location of specific health effects from exposure to increased ozone, PM10, and PM2.5 concentrations are the result of emissions generated by numerous sources throughout the SFBAAB, as opposed to a single project.

Localized air pollutants generally dissipate with distance from the emission source and can pose a health risk to nearby populations. Toxic air contaminants (TACs), such as diesel particulate matter (DPM), are considered localized pollutants. PM2.5 is also considered a localized air pollutant, in addition to being considered a regional air pollutant. Air dispersion models can be used to reliably quantify the health risks to nearby receptors associated with emissions of localized air pollutants from an individual project.

REGULATORY SETTING

Federal and State Regulations

The U.S. EPA is responsible for implementing the programs established under the Federal Clean Air Act, such as establishing and reviewing the National Ambient Air Quality Standards (NAAQS) and judging the adequacy of State Implementation Plans to attain the NAAQS. A State Implementation Plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. If a state fails to enforce its implementation of approved regulations, or if the EPA determines that a State Implementation Plan is inadequate, the EPA is required to prepare and enforce a Federal Implementation Plan to promulgate comprehensive control measures for a given State Implementation Plan.

CARB is responsible for establishing and reviewing the California Ambient Air Quality Standards (CAAQS), developing and managing the California State Implementation Plans, identifying TACs, and overseeing the activities of regional air quality management districts. In California, mobile emissions sources (e.g., construction equipment, trucks, and automobiles) are regulated by CARB and stationary emissions sources (e.g., industrial facilities) are regulated by the regional air quality management districts.

In accordance with the Federal Clean Air Act and California Clean Air Act, areas in California are classified as either in attainment, maintenance (i.e., former nonattainment), or nonattainment of the NAAQS and CAAQS for each criteria air pollutant. To assess the regional attainment status, the BAAQMD collects ambient air quality data from over 30 monitoring sites within the SFBAAB (BAAQMD 2017a). Based on current monitoring data, the SFBAAB is designated as a nonattainment area for ozone, PM10 (CAAQS only), and PM2.5, and is designated an attainment or unclassified area for all other pollutants. The BAAQMD is primarily responsible for ensuring that the NAAQS and CAAQS are attained and maintained in the SFBAAB. The BAAQMD fulfills this responsibility by adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits, inspecting stationary sources of air pollutants, responding to citizen complaints, and monitoring ambient air quality and meteorological conditions.

BAAQMD Screening Criteria

The BAAQMD has established screening criteria to determine whether individual projects could result in potentially significant criteria air pollutant and precursor emissions, which are described in Section 4 of the BAAQMD 2022 CEQA Guidelines (BAAQMD 2022). Preliminary screening for construction and operational criteria provides lead agencies with a conservative indication of whether a project would result in the generation of criteria air pollutants or precursors that exceed the BAAQMD thresholds significance. If all screening criteria for criteria air pollutants and precursors are met by a proposed project, then the lead agency need not perform a detailed assessment of the project's criteria air pollutant and precursor emissions.

Table 4-1 of the BAAQMD CEQA Guidelines contains single land use construction and operational criteria air pollutant and precursor screening levels for various land use categories. For operational emissions, it is assumed that projects would result in a less-than-significant impact related to criteria air pollutants and precursor emissions if: 1) the project size is at or below the operational screening level size for the applicable land use category (contained in Table 4-1 of the BAAQMD CEQA Guidelines); 2) operational activities would not include stationary engines and industrial sources subject to BAAQMD rules and regulations; and 3) operational activities would not overlap with construction activities. For construction emissions, it is assumed that projects would result in a less-than-significant impact related to criteria air pollutants and precursors if: 1) the project size is below the applicable screening level shown in Table 4-1; 2) All BAAQMD-recommended BMPs are included in the project design and implemented during construction, 3) construction-related activities would not overlap with operational activities; and 4) construction-related activities would not include demolition, simultaneous occurrence of two or more construction phases, extensive site preparation, extensive material transport, or stationary sources subject to BAAQMD rules and regulations.

DISCUSSION OF IMPACTS

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less-than-Significant Impact

The 2017 CAP is the only applicable air quality plan that applies to the project area. Pursuant to CEQA Guidelines, the project would conflict with or obstruct the 2017 CAP if (1) the Project were inconsistent with the control measures defined in the CAP, and/or (2) implementation of the project would generate criteria pollutants or toxic air contaminants that exceed the numerical thresholds defined by BAAQMD to attain the goals and objectives of the 2017 CAP.

There are 85 control measures in the 2017 CAP that are categorized into nine economic sections (e.g., transportation, energy, and agriculture) (BAAQMD, 2017a). Several transportation control measures pertain to construction activities including heavy equipment use, such as providing incentives to promote ridesharing (TR8) and purchasing new trucks that exceed NOx emission standards, hybrid trucks, or zero-emission trucks (TR19). The pertinent transportation control measures are voluntary incentive measures that do not require vehicle upgrades or retrofits. The project would not require the purchase of any vehicles or equipment. The project use of construction vehicles and equipment would not conflict with these programs and would not conflict with or obstruct implementation of the control measures identified to achieve the goals of the 2017 CAP. No conflict with the 2017 CAP transportation control measures would occur. Therefore, the impact would be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less-than-Significant Impact

Construction

The Project sites are located within SFBAAB under the jurisdiction of the BAAQMD. The SFBAAB is designated as a nonattainment area for ozone and PM2.5 under both NAAQS and CAAQS (BAAQMD 2017b). The SFBAAB is also designated as nonattainment for PM10 under CAAQS, but not NAAQS (BAAQMD 2017b). The BAAQMD's 2022 CEQA Air Quality Guidelines provides screening criteria for determining if an individual project could result in significant construction-related impact relative to criteria pollutants and precursor emissions. Criteria air pollutants and precursors include reactive organic gases, nitrogen oxides, PM_{10}, $PM_{2.5}$, and carbon monoxide. In accordance with the BAAQMD's 2022 CEQA Air Quality Guidelines (BAAQMD 2022), construction activities would have a less-than-significant impact to air quality if the following screening criteria are met:

1. The project site is below the applicable screening level size shown in Table 4-1 of the BAAQMD 2022 CEQA Air Quality Guidelines;
2. All best management practices are included in the Project design and implementation during construction; and
3. Construction-related activities would not include any of the following:
    - Demolition;
    - Simultaneous occurrence of more than two construction phases;
    - Extensive site preparation; or
    - Extensive material transport (e.g., soil import and export requiring a considerable amount of haul truck activity); or
    - Stationary resources (e.g., backup generators) subject to Air District rules and regulations.

Relative to screening criteria, the BAAQMD CEQA Air Quality Guidelines do not include specific screening level size for infrastructure and habitat enhancement projects; however, a general comparison can be made to other similar land uses. For example, detailed air quality assessments are not required for construction of projects such as single-family residential developments comprised of less than 254 dwelling units, city parks that are less than 10 acres in size, industrial facilities that are less than 452,000 square feet, and construction of office and commercial buildings that are less than 452,000 square feet (BAAQMD 2022). In comparison,

project construction activities would not involve a larger fleet of earthmoving activities or substantial off-hauling than traditional land use projects would, would not include the construction of buildings, and would have a total construction disturbance area of approximately 0.97 acres, well below the screening criteria for other types of land use projects. In addition, project construction would be short in duration, lasting approximately eight months.

Project-related construction activities would not involve the simultaneous occurrence of more than two construction phases or require construction of more than one land-use type. Construction would not involve extensive site preparation or material transport. The project would result in a short-term increase in fugitive dust emissions from vehicles accessing the sites during construction which would include PM10 and PM2.5. The BAAQMD does not have a quantitative threshold of significance for fugitive dust PM10 and PM2.5 emissions; however, the BAAQMD considers implementation of dust control measures during construction sufficient to reduce air quality impacts from fugitive dust to a less-than-significant level. As described in *Section 2.5, Project Measures,* the project would implement BAAQMD-recommended measures for fugitive dust control throughout project construction. Measures would include actions such as covering exposed soils, limiting vehicle speeds on unpaved roadways, and watering exposed surfaces daily. This measure would be included in the construction contract specifications and would ensure that project construction activities would not result in a cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment. The impact would be less than significant.

Operation

The BAAQMD's 2022 CEQA Air Quality Guidelines provides operational screening criteria for determining if an individual project could result in a significant operation-related impact relative to criteria pollutants and precursor emissions. Infrastructure and habitat enhancement projects are not listed as a land use type in the BAAQMD operational pollutant screening criteria; however, a general comparison can be made to similar land use types. For example, the BAAQMD operational screening size for a single-family project is 325 dwelling units, for a City park is 2,613 acres in size, for a general light industrial facility is 541,000 square feet or a site that is 72 acres in size, or for a project that includes 1,249 employees (BAAQMD 2022). In comparison, the project would not include any housing or facilities and would not result in an increase in employees. The project size would be considerably less than the BAAQMD's operation-related criteria pollutant and precursor screening level of other land uses. Therefore, based on the use of operational screening criteria found in the BAAQMD Air Quality Guidelines, the project would not result in substantial long-term operational emissions of criteria air pollutants. Therefore, the project's operational impact would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less-than-Significant Impact

Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential land uses are also considered sensitive to air pollution because residents, including children and the elderly, tend to be at home for extended periods of time, resulting in sustained exposure to pollutants, if present. The closest sensitive receptors to the project are single-family residences located to the east of the Olive Avenue Site and the Habitat Enhancement Site.

The main pollutant of concern for this impact is diesel particulate matter (DPM), which is emitted from construction equipment and heavy-duty truck traffic. Weed management and

vegetation planting activities at the Habitat Enhancement Site would not require the use of mechanical equipment and would not result in heavy-duty truck traffic. Construction activities along Olive Avenue would be limited to eight months and no prolonged or intense construction activity would occur. Construction equipment and heavy-duty truck operation associated with construction activities generate toxic air contaminants (TACs) in the form of diesel exhaust and fugitive dust. There are sensitive receptors (i.e., residences) located immediately adjacent to the project alignment. However, all adjacent residences are situated to the east of the SMART railroad tracks, which separate them from the area in which the most intensive site work would occur along Olive Avenue. Due to the short-term nature of construction activities, any increase in DPM and TAC emissions within the Olive Avenue Site area would be temporary. In addition, as described in Section 2.5, Project Measures, the project would implement BAAQMD-recommended fugitive dust control measures, as well as measures to reduce TAC and DPM emissions.

However, due to the proximity of sensitive receptors to the project site, mitigation measures have been included to reduce any potentially significant impacts. Mitigation Measure AIR-1 would be implemented which requires measures identified in the California Air Pollution Control Officers Association (CAPCOA) Handbook to be implemented to reduce construction-related emissions (CAPCOA 2021). Such measures include using electric or hybrid powered equipment, using cleaner-fuel equipment, limiting heavy-duty vehicle idling, and others. Implementation of Mitigation Measure AIR-1 throughout project construction would ensure that construction emissions to sensitive receptors are less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less-than-Significant Impact

Construction activities would involve the use of gasoline- or diesel-powered equipment that emit exhaust fumes. These activities would take place intermittently throughout the workday and the associated odors are expected to dissipate within the immediate vicinity of the work area. Persons near the construction work area may find these odors objectionable; however, the project would not include uses that have been identified as potential sources of objectionable odors, such as restaurants, manufacturing plants, landfills, and agricultural and industrial operations.

Project operation would be similar to existing conditions and would not result in an increase in other emissions, such as those leading to odors, that would affect a substantial number of people. The impact would be less than significant.

MITIGATION MEASURES

Mitigation Measure AIR-1: Construction-related emissions

The project shall implement the following measures to reduce potential impacts of DPM and TAC emissions at the Olive Avenue Site to a less-than-significant level:

- Utilize electric or hybrid powered equipment and cleaner-fuel equipment wherever feasible.
- Limit heavy-duty diesel vehicle idling time to five minutes or less.
- Post a clear, visible enforcement and complaint sign.

3.2.4 Biological Resources

Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

REGULATORY SETTING

Federal and State Regulations

Endangered and Threatened Plants, Fish, and Wildlife

Specific species of plants, fish and wildlife may be designated as threatened or endangered by the federal Endangered Species Act (ESA), or the California Endangered Species Act (CESA). Specific protections and permitting mechanisms for these species differ under each of these acts, and a species' designation under one law does not automatically provide protection under the other.

The ESA (16 USC 1531 et seq.) is implemented by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). The USFWS and NMFS maintain lists of "endangered" and "threatened" plant and animal species (referred to as "listed species"). "Proposed" or "candidate" species are those that are being considered for listing and are not protected until they are formally listed as threatened or endangered. Under the ESA, authorization must be obtained from the USFWS or NMFS prior to take of any listed species. Take under the ESA is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Take under the ESA includes direct injury or mortality to individuals, disruptions in normal behavioral patterns resulting from factors such as noise and visual disturbance and impacts to habitat for listed species. Actions that may result in "take" of an ESA-listed species may obtain a permit under ESA Section 10, or via the interagency consultation described in ESA Section 7. Federally listed plant species are only protected when take occurs on federal land.

The ESA also provides for designation of critical habitat, which are specific geographic areas containing physical or biological features "essential to the conservation of the species." Protections afforded to designated critical habitat apply only to actions that are funded, permitted, or carried out by federal agencies. Critical habitat designations do not affect activities by private landowners if there is no other federal agency involvement.

The CESA (CFGC 2050 et seq.) prohibits the "take" of any plant and animal species that the California Fish and Game Commission determines to be an endangered or threatened species in California. CESA regulations include take protection for threatened and endangered plants on private lands, as well as extending this protection to "candidate species" which are proposed for listing as threatened or endangered under CESA. The definition of a "take" under CESA ("hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") only applies to direct impact to individuals, and does not extend to habitat impacts or harassment. The California Department of Fish and Wildlife (CDFW) may issue an Incidental Take Permit under CESA to authorize take if it is incidental to otherwise lawful activity and if specific criteria are met. Take of these species is also authorized if the geographic area is covered by a Natural Community Conservation Plan (NCCP), if the NCCP covers that activity. CDFW may also authorize take for voluntary restoration projects through the Restoration Management Permit (RMP).

Fully Protected Species and Designated Rare Plant Species

This category includes specific plant and wildlife species that are designated in the CFGC as protected even if not listed under CESA or the ESA. Fully Protected Species includes specific lists of birds, mammals, reptiles, amphibians, and fish designated in the CFGC. Fully protected species may not be taken or possessed at any time. No licenses or permits may be issued for the take of fully protected species, except for necessary scientific research and conservation purposes. The definition of "take" is the same under the CFGC and the CESA.

Special Protections for Nesting Birds and Bats

The federal Bald and Golden Eagle Protection Act provides relatively broad protections to both of North America's eagle species (bald [*Haliaeetus leucocephalus*] and golden eagle [*Aquila chrysaetos*]) that in some regards are similar to those provided by the ESA. In addition to regulations for special-status species, most native birds in the U.S., including non-status species, have baseline legal protections under the Migratory Bird Treaty Act of 1918 (MBTA) and CFGC, i.e., Sections 3503, 3503.5 and 3513. Under these laws/codes, the harm or collection of adult birds as well as the collection or destruction of active nests, eggs, and young is illegal. For bat species, the Western Bat Working Group designates conservation status for species of bats, and those with a high or medium-high priority are typically given special consideration under CEQA (Western Bat Working Group 2021).

Species of Special Concern, Movement Corridors, and Other Special-status Species under CEQA

A Species of Special Concern (SSC) is a species formally designated by CDFW which meet one or more criteria related to federal ESA status (if it is not listed under CESA), extirpation from California, documented population declines, or small population size within California and risk of declines. Section 15280 of the CEQA Guidelines state that species of special concern must be included in project impact analyses. In addition, CDFW has developed a special animals list as "a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status." This list includes lists developed by other organizations, including for example, the Audubon Watch List Species, the Bureau of Land Management Sensitive Species, and USFWS Birds of Special Concern. Plant species on the California Native Plant Society (CNPS) Rare Plant Inventory (Inventory; CNPS 2024a) with California Rare Plant Ranks (Rank) of 1 and 2, as well as some with a Rank of 3 or 4, are also considered special-status plant species and must be considered under CEQA. Some Rank 3 and Rank 4 species are typically only afforded protection under CEQA when such species are particularly unique to the locale (e.g., range limit, low abundance/low frequency, limited habitat) or are otherwise considered locally rare. Additionally, any species listed as sensitive within local plans, policies and ordinances are likewise considered sensitive. Movement and migratory corridors for native wildlife (including aquatic corridors) as well as wildlife nursery sites are given special consideration under CEQA.

Local Regulations

City of Novato General Plan 2035

The City's General Plan contains the following relevant policies related to biological resources:

> Goal ES 1: Preserve, enhance and restore natural areas and features, including Novato's scenic hillsides, waterways, riparian corridors, wetlands, baylands, and special status species.
>
> Policy ES 2: Minimize the effects of pollution in stormwater runoff in Novato and its effective watersheds. Retain and restore where feasible the natural hydrological characteristics of watersheds in Novato, including daylighting of drainages that were previously buried.
>
> Policy ES 4: Restore damaged portions of riparian areas to their natural state, including removal of invasive species, whenever feasible.
>
> Policy ES 10: Protect water resources from pollution and sedimentation and preserve their environmental and recreation values.

City of Novato Tree Ordinance

Chapter 17, "Trees and Shrubs" of the Novato Municipal Code regulates the alteration and/or removal of certain trees and shrubs on private and City-owned or controlled properties within the City limits. A tree permit is required for the removal or alteration of any "heritage tree" on any private parcel or removal of one or more trees on any undeveloped private parcel in the city. A "heritage tree" is defined as: "any native or non-native woody plant: (1) characterized by having a major trunk or trunks of a diameter of 24 inches (circumference of 75 inches) or measured at 24 inches above grade; or (2) any other so designated by the city council based upon a finding that it has special historical associations due to its age, character, species, or location. A "tree" is defined as any woody native or non-native plant characterized by having a major trunk or trunks of a diameter of six inches (circumference of 19 inches) or more measured at 24 inches above existing grade. A tree permit is also required to cut, trim, prune, spray, brace, plant, move, remove, or replace any street tree or shrub within the city right-of-way. An encroachment permit shall also be obtained for work to be done in the public right-of-way.

City of Novato Woodland and Tree Preservation Ordinance

Chapter 19, Division 19.39 "Woodland and Tree Preservation" of the City Municipal Code is designed to promote the conservation of native trees, forests and woodlands on private and public lands; and the regeneration of forest or woodland on agricultural lands that were formerly forest or woodland, or have the potential for supporting forest or woodlands. This provision applies to all proposed development and new land uses on properties with native tree, forest or woodland resources, as determined by the director. The land use permit application for any project subject to this provision will require a tree inventory, as well as a Woodland Conservation and Management Plan. The tree inventory shall include a site plan showing the locations and types of all existing trees more than three inches in diameter and shall note which trees are proposed to be removed. The Woodland Conservation and Management Plan shall be prepared by a qualified forest management professional and shall comply with the principles outlined in Section 19.39.030, and the standards outlined in Section 19.39.040.1.

City of Novato Waterway and Riparian Protection Policy

Division 19.35, "Waterway and Riparian Protection" within Chapter XIX of the Novato Municipal Code provides standards and regulations to protect, maintain, restore, and enhance the ecological integrity and resource functions of waterways within the City. All lands adjoining or encompassing watercourses shown on "EN Map 1" of the City of Novato General Plan and their tributaries, as determined by the director, will be protected by the division. Stream Protection Zones have been established to include the stream bed, the stream banks, all riparian vegetation, and an upland buffer zone at least 50 feet wide measured from the top of the channel bank. Uses permitted within the Stream Protection Zone are limited to native landscaping, fencing, maintenance roads, utilities, storm drains, trails and passive (low-impact) recreation. A use permit is required for any proposed developments, removal or planting of vegetation, construction, or any alteration of an embankment within the Stream Protection Zone.

City of Novato Wetland Protection and Restoration

Division 19.36, "Wetland Protection and Restoration" within Chapter XIX, "Zoning" of the Novato Municipal Code provides standards and regulations to protect wetland resources. Developments must be designed and constructed to avoid all lands within the City that support wetlands as delineated by the Corps under the provisions of the CWA. A use permit is required for any project

that is implemented within 50 feet of a wetland, or any project requiring wetland protection measures, involving wetland encroachment, or requiring wetland mitigation.

METHODOLOGY

WRA biologists conducted field surveys of the project sites to map vegetation, aquatic features, and other land cover types; document plant and wildlife species present; and evaluate on-site habitat for the potential to support special-status species as defined by CEQA.[1] Prior to the site visits, WRA biologists reviewed literature resources and performed database searches to assess the potential for sensitive land cover types and special-status species, including:

- Web Soil Survey (USDA 2024)
- Novato 7.5-minute U.S. Geological Survey (USGS) quadrangle (USGS 2024)
- Contemporary aerial photographs (Google Earth 2024)
- Historical aerial photographs (NETR 2024)
- National Wetlands Inventory (USFWS 2024a)
- California Aquatic Resources Inventory (SFEI 2024)
- CNDDB (CDFW 2024a)
- CNPS Inventory (CNPS 2024a)
- Consortium of California Herbaria (CCH1 2024, CCH2 2024)
- USFWS Information for Planning and Consultation (USFWS 2024b)
- eBird Online Database (Cornell Lab of Ornithology 2024)
- California Bird Species of Special Concern in California (Shuford and Gardali 2008)
- California Amphibian and Reptile Species of Special Concern (Thomson et al. 2016)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)
- A Manual of California Vegetation, Online Edition (CNPS 2024b)
- Preliminary Descriptions of the Terrestrial Natural Communities (Holland 1986)
- California Natural Community List (CDFW 2024b)
- Database searches (i.e., CNDDB, CNPS) for special-status species focused on the Clayton and eight surrounding USGS 7.5-minute quadrangles.

Following the remote assessment, WRA biologists completed a field review to document: (1) land cover types (e.g., vegetation communities, aquatic resources), (2) existing conditions and to determine if such provide suitable habitat for any special-status plant or wildlife species, (3) if and what type of aquatic land cover types (e.g., wetlands) are present, and (4) if special-status species are present.

Special-status Species

Potential occurrence of special-status species at the project sites was evaluated by first determining which special-status species occur in the vicinity of the project sites through a literature and database review as described above. Presence of suitable habitat for special-status species was evaluated during the site visits based on physical and biological conditions in the project sites as well as the professional expertise of the investigating biologists. The

[1] WRA biologists conducted a field survey of the Habitat Enhancement Site on September 22, 2021, and surveys of the Olive Avenue Site on April 20, 2022, and September 9, 2024.

potential for each special-status species to occur in the project sites was then determined according to the following criteria:

- **No Potential.** Habitat on and adjacent to the project sites is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Unlikely.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the project sites is unsuitable or of very poor quality. The species is not likely to be found in the project sites.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the project sites is unsuitable. The species has a moderate probability of being found in the project sites.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the project sites is highly suitable. The species has a high probability of being found in the project sites.
- **Present.** Species is observed on the site or has been recorded (i.e., CNDDB, other reports) in the project sites in the recent past.

ENVIRONMENTAL SETTING

Vegetation and Land Cover

WRA biologists observed three land cover types within the Olive Avenue Site: developed, ruderal herbaceous vegetation, and intermittent stream/ditch. The majority of the Olive Avenue Site is covered by ruderal herbaceous vegetation, which is characterized by areas that have been graded and mown repeatedly, and are dominated by weedy, disturbance-tolerant species. Developed areas include paved and/or gravel-covered surfaces, including Olive Avenue and Redwood Boulevard; the Novato Downtown commercial area, and the SMART railroad. Within the site, Olive Ditch runs parallel to the north side of Olive Avenue and flows east under the railroad prism into an unnamed intermittent stream/ditch that flows north, parallel to the eastern edge of the railroad. Conditions within the Olive Avenue Site have remained relatively unchanged since at least 1982, with the exception of the construction of a driveway between 2005 and 2009, connecting Olive Avenue to the commercial property to the north of the site (NETR 2024). A stretch of Olive Ditch within the site was culverted under the driveway during construction (NETR 2024).

WRA biologists observed four land cover types within the Habitat Enhancement Site: developed, ruderal vegetation, intermittent stream (Pacheco Creek), and riparian red willow woodland. The majority of the Habitat Enhancement Site consists of Pacheco Creek and its associated riparian canopy. The outer edges of the site consist of ruderal, disturbed uplands and a paved access road. Historically, the site was a part of Hamilton Field, a United States Air Force base established in the 1920s and decommissioned in the 1970s (NETR 2024).

Special-status Species

Special-status Plants

Based on a review of the resource databases described above, 106 special-status plant species have been documented in the vicinity of the Olive Avenue Site, and 103 special-status plant

species have been documented in the vicinity of the Habitat Enhancement Site. However, all special-status plant species which have been documented nearby are unlikely or have no potential to occur within the project sites due to one or more of the following:

- Hydrologic, edaphic (soil), topographic, and pH conditions necessary to support the special-status plant species are not present in the project sites;
- Associated natural communities necessary to support the special-status plant species are not present in the project sites;
- The project sites are geographically isolated from the documented range of the special-status plant species;
- The historical landscape or habitat(s) of the project sites were not suitable habitat prior to land conversion to support the special-status plant species;
- Land use history and contemporary management (e.g., grading, mowing) has degraded the localized habitat necessary to support the special-status plant species.

Special-status Wildlife

Based on a review of the resource databases listed above, 39 special-status wildlife species have been documented in the vicinity of the Olive Avenue Site, and 46 special-status wildlife species have been documented in the vicinity of the Habitat Enhancement Site. Most of these species are unlikely to occur or have no potential to occur within the project sites due to lack of suitable habitat features. Features not found within the project sites that are required to support special-status wildlife include:

- Vernal pools,
- Rivers or other flowing perennial waters,
- Tidal marsh areas,
- Old growth redwood or fir forest,
- Sandy beaches or alkaline flats,
- Presence of specific host plants,
- Serpentine soils to support host plants, and
- Caves, mine shafts, or abandoned buildings.

The absence of such habitat features eliminates components critical to the survival or movement of most special-status wildlife species found in the vicinity. One special-status wildlife species has the potential to occur in the immediate vicinity of or in portions of the Olive Avenue Site: white tailed-kite (*Elanus leucurus*). Two special-status wildlife species have the potential to occur in or in the immediate vicinity of the Habitat Enhancement Site: white-tailed kite and saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*).

White-tailed kite is a resident in open to semi-open habitats throughout lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas, and wetlands. This species was observed foraging adjacent to the Habitat Enhancement Site during the September 21, 2021, site visit. Large trees within and adjacent to the riparian area of Pacheco Creek could provide a suitable nesting habitat for this species. Additionally, open grasslands and marsh areas within the immediate vicinity of the Habitat Enhancement Site could provide typical foraging habitat. White-tailed kite may also nest in trees and forage in open grassland within

the Olive Avenue Site or in the immediate vicinity. Thus, this species is considered to have moderate potential to nest and is likely to forage within the project sites.

Saltmarsh common yellowthroat is a subspecies of the common yellowthroat that is found in freshwater marshes, coastal swales, riparian thickets, brackish marshes, and saltwater marshes. This species requires thick, continuous cover such as tall grasses, tule patches, or riparian vegetation down to the water surface for foraging and prefers willows for nesting (Shuford and Gardali 2008). While the Habitat Enhancement Site does not constitute ideal habitat for this species (given that it is most prone to nesting in marsh areas), the proximity of the site to suitable habitat and dense riparian cover within the site may provide nesting habitat for this species. Additionally, this species is likely to forage within the Habitat Enhancement Site given the proximity to large swaths of suitable marsh habitat. Thus, this species is considered to have moderate potential to occur within the Habitat Enhancement Site.

In addition to the special-status bird species described above, common native nesting birds protected under the Migratory Bird Treaty Act may nest in trees within the project sites. In addition, common roosting bats may form hibernacula or maternity roosts in select broad-leafed trees or in large tree cavities within the Habitat Enhancement Site. In addition, marsh areas and grasslands near the Habitat Enhancement Site could provide foraging opportunities for bats due to the likely presence of invertebrates.

No Critical Habitat, native wildlife nursery sites, or essential fish habitat is mapped within the project sites (NMFS 2024, USFWS 2024b).

DISCUSSION OF IMPACTS

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?

Less-than-Significant Impact with Mitigation Incorporated

As described in the *Environmental Setting* section above, no special-status plants have the potential to occur within the project sites. Therefore, the project would not have a substantial adverse effect on any special-status plant species. No impact would occur.

As described in the *Environmental Setting* section above, white-tailed kite has the potential to nest and forage within both project sites, and saltmarsh common yellowthroat has the potential to nest and forage within the Habitat Enhancement Site. In addition, common native nesting bird species may use trees within the project sites for nesting. Project activities during construction may directly impact the nests of protected species or may impact these species through visual and auditory disturbance sufficient to cause nest abandonment. Due to the protected status of these species under both the Migratory Bird Treaty Act and CFGC, impacts to special-status and common native nesting birds would be a potentially significant impact under CEQA.

To avoid and minimize impacts to special-status birds and common native nesting birds, Mitigation Measure BIO-1 would be implemented at the Olive Avenue Site, which requires pre-construction nesting bird surveys to be conducted if construction work occurs during the nesting bird season from February 1 to August 31. If active nests are identified during surveys, a no-disturbance buffer shall be established around the nest until all young have fledged or the nest otherwise becomes inactive. Implementation of this measure would ensure that project work at

the Olive Avenue Site would not have a substantial adverse effect on special-status birds or common native nesting birds.

To avoid and minimize impacts to special-status birds and common native nesting birds, Mitigation Measure BIO-2a and BIO-2b would be implemented at the Habitat Enhancement Site. Mitigation Measure BIO-2a requires that tree removal and removal of dense shrubs or underbrush avoid the nesting bird season for the first year of work at the Habitat Enhancement Site. If any large-scale vegetation removal must occur during the nesting bird season, pre-construction nesting bird surveys must be conducted to determine the presence or absence of active nests that may be impacted by project activities. If nests of protected bird species are found, no-disturbance buffers shall be established around the nest until all young have fledged or the nest becomes otherwise inactive. Mitigation Measure BIO-2b requires that, prior to scheduled weed management during the nesting season, targeted bird surveys shall be conducted in any locations where vegetation removal would occur in accordance with the same measures contained in BIO-2a. Implementation of Mitigation Measure BIO-2a and BIO-2b would ensure that project work at the Habitat Enhancement Site would not have a substantial adverse effect on special-status birds or common native nesting birds.

Roosting bat species which may be present at the Habitat Enhancement Site could be negatively impacted if roost trees are removed or trimmed while roosting bats are present, which is a potentially significant impact. To avoid and minimize impacts to common roosting bats that may be present at the Habitat Enhancement Site, Mitigation Measure BIO-3 would be implemented. This measure requires that any planned tree removal at the Habitat Enhancement Site shall occur outside of the bat maternity season to the extent feasible. If this work window is not feasible, preconstruction bat roost assessments shall be conducted to determine if suitable roost habitat is present. If maternity roosts are detected during these surveys, avoidance measures shall be implemented until the end of the maternity roosting season. Therefore, Mitigation Measure PC-BIO-2 would ensure that project work at the Habitat Enhancement Site would not have a substantial adverse effect on common roosting bat species.

With the implementation of Mitigation Measures BIO-1, BIO-2a, BIO-2b, and BIO-3, the project would not have a substantial adverse effect on any special-status species. The impact would be less than significant with mitigation incorporated.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?

Less-than-Significant Impact

The Olive Avenue Site includes one sensitive natural community: intermittent stream/ditch. Because this sensitive community is also an aquatic resource, potential impacts to this community are discussed below under *Impact c).* As described in further detail below, mitigation measures would be required to reduce potential temporary and indirect impacts to intermittent stream/ditch to a less-than-significant level. Mitigation Measures BIO-4 and BIO-5 would be implemented at the Olive Avenue Site to ensure that the project would not have a substantial adverse effect on any sensitive natural community.

The Habitat Enhancement Site contains two sensitive natural communities: riparian red willow woodland and intermittent stream. Because intermittent stream is also an aquatic resource, potential impacts to this community are discussed below under *Impact c).* As described in further detail below, mitigation measures would be required to reduce potential temporary and

indirect impacts to intermittent stream to a less-than-significant level. Mitigation Measures BIO-4 and BIO-5 would be implemented to ensure that project activities at the Habitat Enhancement Site would not have a substantial adverse effect on intermittent stream.

Although no native riparian vegetation is to be removed as a result of the project, enhancement activities such as intensive weed removal, planting, and installation of temporary irrigation would temporarily impact approximately 1.52 acres of riparian red willow woodland, which is subject to the jurisdiction of CDFW. A Notification of Lake or Streambed Alteration (LSA) has been submitted to CDFW which describes the habitat enhancement work at the Habitat Enhancement Site. The LSA requires the submittal of a Riparian Enhancement Plan to CDFW for approval. All areas of temporary impact to riparian red willow woodland would be mitigated via on-site revegetation, as described in the LSA. As described in *Section 2.3, Project Components,* the project includes planting approximately 90 riparian trees and 1,400 riparian shrubs and woody vines to enhance and expand the riparian canopy of Pacheco Creek. Enhancement activities, including the management of invasive weeds and planting of riparian trees, shrubs, and herbs, would ultimately increase the ecological function of riparian red willow woodland within the Habitat Enhancement Site without any permanent impacts. Therefore, project work at the Habitat Enhancement Site would not have a substantial adverse effect on riparian red willow woodland. The impact would be less than significant.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less-than-Significant Impact with Mitigation Incorporated

The Olive Avenue Site does not include wetlands but does encompass approximately 0.07 acre (600 linear feet) of intermittent stream/ditch. Culvert and headwall (and/or junction box) installation included in the Olive Avenue Site work would result in permanent impacts to 0.07 acre of the intermittent stream/ditch. As an aquatic resource that subject to jurisdiction by the RWQCB and CDFW, permanent impacts to intermittent stream/ditch would be considered a potentially significant impact. In addition, construction activities on-site could result in runoff which could indirectly impact the intermittent stream/ditch north of the proposed headwall and/or junction box location.

To avoid and minimize potential temporary and permanent impacts to the intermittent stream/ditch, Mitigation Measures BIO-4 and BIO-5 would be implemented. Mitigation Measure BIO-4 necessitates that permit applications shall be submitted to the RWQCB and CDFW for the project, which shall propose compensatory mitigation at a City-owned parcel that includes a section of Pacheco Creek (i.e., project work at the Habitat Enhancement Site). As described in *Section 2.3, Project Components*, enhancement activities shall include the removal of invasive weeds, trash, and debris, and planting of native riparian vegetation. Compensatory mitigation is proposed at a 2:1 ratio by area (mitigation to impact) and a 1:1 ratio by length, for permanent impacts to the intermittent stream/ditch at the Olive Avenue Site. With implementation of this measure, permanent impacts to intermittent stream/ditch on the Olive Avenue Site would be reduced to a less-than-significant level.

Mitigation Measure BIO-5 includes general avoidance and minimization measures to be implemented throughout construction at the Olive Avenue Site to avoid indirect impacts to the intermittent stream/ditch. Measures include all permit conditions, legal requirements, and appropriate engineering practices, as well as Best Management Practices (BMPs) as identified

by the RWQCB, Corps, and CDFW. Implementation of Mitigation Measure BIO-5 would ensure that potential indirect impacts to intermittent stream/ditch on the Olive Avenue Site would be reduced to a less-than-significant level.

The Habitat Enhancement Site includes approximately 0.43 acre (860 linear feet) of Pacheco Creek, an intermittent stream. Removal of trash and invasive weeds in Pacheco Creek could cause temporary impacts to the intermittent stream. In addition, enhancement activities at the Habitat Enhancement Site could result in runoff, which would indirectly impact Pacheco Creek. As an intermittent stream that is potentially subject to the jurisdiction of the Corps, RWQCB, and CDFW, temporary impacts to Pacheco Creek would constitute a potentially significant impact.

To avoid and minimize potential temporary and indirect impacts to Pacheco Creek, Mitigation Measure BIO-4 and BIO-6 would be implemented. Mitigation Measure BIO-4 requires the project to implement enhancement activities at Pacheco Creek (i.e., the Habitat Enhancement Site), including the submittal of a Riparian Enhancement Plan. Mitigation Measure BIO-6 requires that general avoidance and minimization measure be implemented throughout construction work at the Habitat Enhancement Site to reduce potential indirect impacts to Pacheco Creek to a less-than-significant level.

With implementation of Mitigation Measures BIO-4, BIO-5, and BIO-6, the project would not have a substantial adverse effect on state or federally protected wetlands. The impact would be less than significant with mitigation incorporated.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less-than-Significant Impact

The project sites are not within a designated wildlife corridor (CalTrans 2010). The project sites are located within a much larger tract of residential and light industrial development within a reasonably well-developed portion of Marin County.

No portions of the Olive Avenue Site provide connectivity between areas of suitable habitat. Common, urban-adapted wildlife species presumably utilize the site to some degree for movement at a local scale; however, the site itself does not provide corridor functions beyond connecting similar ruderal or developed parcels in surrounding areas. For terrestrial species, all portions of the project sites occur within a greater context of urban development and for aquatic species, there is no connectivity between the site and upstream freshwater habitats or downstream saltwater habitats. No impact would result from project work at the Olive Avenue Site.

While the Habitat Enhancement Site is adjacent to bayland open spaces to the east, no portions of the site provide functional connectivity between these areas and other similar habitats. Common, urban-adapted wildlife species presumably utilize the site to some degree for movement at a local scale; however, the site itself does not provide corridor functions beyond connecting similar ruderal or developed parcels in surrounding areas. For terrestrial species, all portions of the site are within a greater context of urban development, and for aquatic species, there is no connectivity between the site and upstream or freshwater habitats or downstream marine habitats. No impact will occur to migratory corridors for terrestrial and aquatic species.

Migratory birds and urban-adapted species use the riparian area and surrounding uplands within the Habitat Enhancement Site opportunistically, and large amounts of higher quality habitat exist

in the nearby San Francisco Bay and surrounding marshes. The Habitat Enhancement Site is not considered to be important avian habitat given the setting. Additionally, the outcome of the project is likely to result in an improvement to existing habitat for both birds and other common wildlife species due to the restorative nature of the work. Based on these factors, project work at the Habitat Enhancement Site would result in a less-than-significant impact to migratory corridors and habitat linkages and will likely provide a long-term net benefit.

While construction activities at the project sites may discourage wildlife from passing through the project sites, the project would not change the land use of the sites and therefore would not result in a permanent impact related to wildlife movement. Therefore, the project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. The impact would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact

Local policies and ordinances which are applicable to the project include the City of Novato Tree Ordinance, City of Novato Woodland and Tree Preservation Ordinance, City of Novato Stream and Riparian Setback Policy, and City of Novato Wetland Protection and Restoration policy. These policies are described in the *Local Regulations* section above.

The Olive Avenue Site does not contain any native trees or woodlands on public lands, and project work at this site would not include the removal of any trees. Therefore, project work at the Olive Avenue Site would not conflict with the City's Tree Ordinance or Woodland and Tree Preservation Ordinance.

The Olive Avenue Site contains 600 linear feet of intermittent stream/ditch. Activities within the Stream Protection Zone (i.e., 50 feet from the top of the channel bank) typically require a use permit from the City. However, because all project work is being conducted in the City right-of-way, under contract with the City, a use permit would not be required for the project. Therefore, activities at the Olive Avenue Site would not conflict with the City's Riparian Setback Policy. The intermittent stream/ditch, below the ordinary high-water mark, contains wetland vegetation which could be subject to the City's Wetland Protection and Restoration policy. However, because all work is being conducted in the City right-of-way, under contract with the City, a use permit would not be required for the project. Therefore, the project would not conflict with the City's Wetland Protection and Restoration Policy.

Project work at the Habitat Enhancement Site would include the removal of several non-native trees, including species such as silver wattle (*Acacia dealbata*) and Canary Island date palm (*Phoenix canariensis*). Removal of these non-native species would not require a tree permit because the work is being conducted in a City-owned parcel under contract with the City. Therefore, project work at the Habitat Enhancement Site would not conflict with the City's Tree Ordinance. While the Habitat Enhancement Site includes native trees and woodlands on public lands, the project does not include proposed development or new land use within the site. Therefore, project work at the Habitat Enhancement Site would not conflict with the City's Woodland and Tree Preservation Ordinance.

Pacheco Creek is depicted on "EN Map 1" of the City of Novato General Plan and is therefore protected by the City's Riparian Setback Policy. Activities within the Stream Protection Zone (i.e.,

50 feet from the top of the channel bank) typically require a use permit from the City. However, since all revegetation work is being conducted in a City-owned parcel under contract with the City, a permit would not be required for the project. Therefore, project work at the Habitat Enhancement Site would not conflict with the City's Riparian Setback Policy. The Habitat Enhancement Site does not include wetland resources; therefore, project work at the site would not conflict with the City's Wetland Protection and Restoration policy.

Therefore, project work at the Olive Avenue Site and Habitat Enhancement Site would not conflict with any local policies or ordinances protecting biological resources. No impact would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact

The project sites are not located in an area that is subject to the provisions of a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the project would not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur.

MITIGATION MEASURES

Mitigation Measure BIO-1. Olive Avenue Site Nesting Bird Surveys

To the extent feasible, project-related activities at the Olive Avenue Site shall be avoided during the nesting bird season, generally defined as February 1 – August 31. If project work at the Olive Avenue Site must occur during the nesting bird season, pre-construction nesting bird surveys shall be conducted within seven days of initial ground disturbance in new areas to avoid disturbance to active nests, eggs, and/or young of nesting birds. These surveys would determine the presence or absence of active nests that may be affected by project activities. It is also recommended that any trees and shrubs in or adjacent to the Olive Avenue Site that are proposed for removal and could be used as avian nesting sites be removed during the non-nesting season (September 1 through January 31).

If an active nest is located, a no-disturbance buffer shall be established around the nest until all young have fledged or the nest otherwise becomes inactive (e.g., due to predation). Suggested buffer zone distances differ depending on species, location, baseline conditions, and placement of nest and would be determined and implemented in the field by a qualified biologist.

Mitigation Measure BIO-2a. Habitat Enhancement Site Nesting Bird Surveys

To the extent feasible and as planned, project-related activities at the Habitat Enhancement Site in Year 1, particularly tree removal or the removal of dense shrubs or underbrush, shall be avoided during the nesting bird season, generally defined as February 1 through August 15. If any large-scale vegetation removal at the Habitat Enhancement Site must occur during the nesting bird season, pre-activity nesting bird surveys shall be conducted within 14 days of start-of-work to avoid disturbance to active nests, eggs, and/or young of nesting birds. These surveys would determine the presence or absence of active nests that may be affected by project activities. It is also recommended that any trees and shrubs in or adjacent to the Habitat

Enhancement Site that are proposed for removal and that could be used as avian nesting sites be removed during the non-nesting season (August 16 through January 31) to reduce the availability of potential bird nesting habitat.

In the event that a nest of a protected bird species is located, a no disturbance buffer shall be established around the nest until all young have fledged or the nest otherwise becomes inactive (e.g., due to predation). Suggested buffer zone distances differ depending on species, location, baseline conditions, and placement of nest and will be determined and implemented in the field by a qualified biologist. If special-status bird species are found to be nesting within the Habitat Enhancement Site, larger disturbance buffers are likely to be put in place.

Mitigation Measure BIO-2b. Habitat Enhancement Site Targeted Bird Surveys

Prior to scheduled weed management events during the nesting bird season at the Habitat Enhancement Site (February 1 through August 15), targeted bird surveys shall be conducted in any locations where vegetation removal will occur if vegetation is greater than 24 inches in height. Surveys should follow the same methodology as described in Mitigation Measure BIO-2a and should focus on the area where vegetation removal is planned and the surrounding 100 feet. Large trees within the broader vicinity shall be surveyed as well for the potential presence of nesting raptors. Lastly, to the extent feasible, weed management efforts should be conducted using hand tools or light power tools (e.g., hand-held string trimmers) to increase the likelihood that workers will detect nesting birds if they are present.

Mitigation Measure BIO-3. Habitat Enhancement Site Bat Roost Assessments

Any planned tree removal within the Habitat Enhancement Site should occur outside of the bat maternity season to the extent feasible (generally April 1 through October 31). If this work window is not feasible due to conflicts with other work windows or water quality permits, pre-construction bat roost assessments conducted by a qualified biologist no less than 14 and at most 30 days prior to removal shall be conducted to determine if suitable roost habitat is present in the riparian strip. If maternity roosts are detected during these surveys, additional measures including avoidance of the roost trees should be put in place until the end of the maternity roosting season. If this is not feasible, appropriate species- and roost specific mitigation measures shall be developed in consultation with CDFW. Regardless of time of year, all felled trees or large limbs shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape.

Mitigation Measure BIO-4. Olive Avenue and Pacheco Creek Riparian Habitat Enhancement

Permit applications shall be submitted to the RWQCB and CDFW for the Olive Avenue Widening Project. These applications shall propose compensatory mitigation at a City-owned parcel that includes a section of Pacheco Creek (i.e., the Habitat Enhancement Site), an intermittent stream with in-channel wetlands, and a riparian canopy. Enhancement activities shall include the removal of invasive weeds, trash, and debris, and planting of native riparian vegetation. A Riparian Enhancement Plan shall also be submitted to the RWQCB and CDFW for review and approval. Compensatory mitigation shall be proposed at ratios of at least 2:1 by area (mitigation to impact) and a 1:1 by length.

Mitigation Measure BIO-5. Olive Avenue Site Runoff Measures

General avoidance and minimization measures shall be implemented during the proposed project work at the Olive Avenue Site to minimize indirect impacts to the intermittent stream/ditch. All

permit conditions, including the implementation of BMPs as identified by RWQCB, Corps, and CDFW, shall be adhered to. General measures to be implemented as part of project work at the Olive Avenue Site include the following:

- All construction shall occur during the dry season (May 15 through October 15) and shall be suspended during unseasonable rainfalls of greater than one-half inch over a 24-hour period. Activities shall not resume until at least 24 hours have elapsed since the cessation of visible rain.
- No fueling, cleaning, or maintenance of vehicles or equipment shall take place within any areas where an accidental discharge may cause hazardous materials to enter waterways.
- Any equipment or vehicles used for enhancement activities shall be checked and maintained daily to prevent leaks of fluids that could be deleterious to aquatic habitats.
- All equipment shall be cleaned before arriving on the site and before removal from the site to prevent spread of invasive plants.
- Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be located outside of the stream channel banks.
- If any activities require the use of heavy equipment near aquatic features, they shall have absorbent materials designated for spill containment and cleanup activities on-site for use in an accidental spill.
- Stockpiles of excavated soil or other shall be covered when not in active use (i.e., will not be used, or moved for 72 hours). All trucks hauling soil, sand, and other loose materials shall be covered.
- At the end of the project, all temporary flagging, fencing, or other materials shall be removed from the project site and vicinity of the intermittent stream/ditch.
- No equipment shall be washed or rinsed where runoff could enter aquatic features.
- All refueling and maintenance of equipment, other than stationary equipment, shall occur outside of the top-of-bank.

Mitigation Measure BIO-6. Habitat Enhancement Site Runoff Measures

The project shall adhere to all permit conditions, including the implementation of Best Management Practices (BMPs) as identified by RWQCB and CDFW. General measures to be implemented at the Habitat Enhancement Site include the following:

- No fueling, cleaning, or maintenance of vehicles or equipment will take place within any areas where an accidental discharge may cause hazardous materials to enter waterways.
- Any equipment or vehicles used for enhancement activities will be checked and maintained daily to prevent leaks of fluids that could be deleterious to aquatic habitats.
- All equipment will be cleaned before arriving on the site and before removal from the site to prevent spread of invasive plants.
- Prior to enhancement activities, locations and equipment access points that minimize riparian disturbance will be determined. Pre-existing access points will be used whenever possible. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, will be located outside of the stream channel banks.
- If any activities require the use of heavy equipment near the stream, they will have absorbent materials designated for spill containment and cleanup activities on-site for use in an accidental spill.

- Stockpiles of excavated soil or other will be covered when not in active use (i.e., will not be used, or moved for 72 hours). All trucks hauling soil, sand, and other loose materials will be covered.
- At the end of the project all temporary flagging, fencing, or other materials will be removed from the project site and vicinity of the channel, unless prescribed by the Riparian Enhancement Plan.
- No equipment will be washed or rinsed where runoff could enter the creek.
- All refueling and maintenance of equipment, other than stationary equipment, will occur outside of the top-of-bank.

3.2.5 Cultural Resources

Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☒	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Far Western Anthropological Research Group (Far Western) prepared an Archaeological Resources Inventory Report (Archaeological Report) for the project in March 2025 (DeBaker, Izzi, & Osterlye 2025). The report was prepared to comply with both Section 106 of the National Historic Preservation Act (NHPA) and CEQA. The Area of Potential Effects (APE) for the study was established by the City of Novato in 2021 and updated in 2022, which includes the Olive Avenue Site APE and the Pacheco Creek APE. The Archaeological Report includes the results of a records search, archival review, consultation with the Federated Indians of Graton Rancheria (Graton Rancheria), archaeological site sensitivity assessment, and pedestrian survey. The information presented in this section is based on and adapted from the Archaeological Report. See *Section 3.2.18: Tribal Cultural Resources* below for the results of consultation efforts with Graton Rancheria.

ENVIRONMENTAL SETTING

Prehistory

The concept of prehistory refers to the period of time before events were recorded in writing and varied worldwide. Because there is no written record, the understanding of California prehistory relies on archaeological materials and oral histories passed down through generations. The first comprehensive study of the Bay Area's prehistory was conducted between 1906 and 1908 and documented some of the most significant archaeological sites along California's central coast (Nelson 1909). Over 425 deposits of shellmounds consisting of shell, ash, rock, and other cultural materials, as well as human burials, once existed around the Bay Area. Although most of these shellmounds have been destroyed by modern construction, there is the potential for basal remnants to be preserved below ground surface. Archaeological research to study these shellmounds began in the early 1900s, focusing on the depth and contents of these mounds, and later efforts sought to build a regional cultural sequence based on mortuary practices and artifacts. This led to the development of a system classifying the Bay Area's prehistory into Early, Middle, and Late Periods, with revisions over time.

The Early Period (3800–2450 calibrated years before present [cal BP]) is marked by a focus on terrestrial resources, while the Middle Period (2150–930 cal BP) shows a shift to marine-based subsistence and mound-building. The Late Period (685–180 cal BP) is defined by the use of the bow and arrow, increased trade, and a greater emphasis on acorns. The chronology is primarily focused on Late Holocene occupations due to the loss of earlier archaeological sites from sea-level rise. While Early Holocene sites are rare, some examples have been discovered in deeply buried contexts, providing evidence of occupation in the region prior to 4,500 years ago.

Ethnography

The project sites are located in the ancestral territory of the Coast Miwok, who lived in what is now Marin County and spoke one of the California Penutian languages. Prior to European settlement, the Coast Miwok subsisted seasonally and focused on gathering acorns, seeds, nuts, and greens as well as hunting deer, elk, sea mammals, and fishing. They also relied heavily on marine resources, evidenced by the many shell middens around the Bay Area. Coast Miwok settlements typically consisted of primary villages along streams with satellite communities or special-use sites, usually seasonally occupied, in the surrounding countryside. Domestic structures were generally conical in shape with a central hearth and built of perishable wood, grass, rushes, and tule around a frame fashioned of two-fork poles.

The APE includes lands of one Coast Miwok group, the *Omiomi*, who were concentrated in the Novato Creek watershed (Milliken et al. 2007). The adjacent *Aguastos* occupied the San Rafael Creek area to the south. Milliken's 2006 ethnographic study on the Bay Area region revealed that the Novato Creek area, ascribed to the *Omiomi*, had the highest population density in the Bay Area region, with an estimated population density of 15.6 persons per square mile. This high population density suggests a rich archaeological record in the region, which has been largely overlooked in recent research.

European encroachment in central and northern California, particularly around the Bay Area, had a profound impact on indigenous groups such as the Bay Miwok, Pomo, and Ohlone. The Coast Miwok were heavily affected by Spanish missionization, with many joining Mission Dolores in the late 18th century and later relocating to Mission San Rafael after its founding in 1817. Following the secularization of the missions in the 1830s, many Native Americans were forced into labor under Mexican landowners or struggled to find their communities, leading to a dramatic decline in the Coast Miwok population. By 1908, only an estimated 11 Coast Miwok individuals remained out of the estimated 1,500 to 3,000 precontact Coast Miwok population. Recent archaeological studies have shown that Native communities actively maintained cultural persistence through adaptation, challenging the narrative of their disappearance and demonstrating their continued connection to the land and cultural traditions.

Regional History

European contact with the Coast Miwok began in the late 1500s with brief encounters by explorers, but sustained European presence in California began in the 1700s, primarily through Spanish missions. Mission San Francisco de Asís was founded in 1776, followed by Mission San Rafael Arcángel in 1817 to address high mortality among the indigenous population. After Mexico gained control in 1821 and secularized the missions in 1834, lands were divided into ranchos, where many Native Americans continued working as laborers. By the mid-1800s, agriculture became a key economic pursuit, especially to support the gold rush. The arrival of the railroad in 1879 spurred growth in Novato, eventually transforming it into a vibrant town, while ranch lands were subdivided. Following World War II, Novato saw rapid residential growth,

becoming Marin County's second-largest city by 2010. The former Hamilton Air Force Base, which played a significant role in WWII and the Cold War, now forms part of the area's history.

REGULATORY SETTING

Cultural Resources

As set forth in Section 5024.1(c) of the Public Resources Code for a cultural resource to be deemed "important" under CEQA and thus eligible for listing on the California Register of Historical Resources (California Register), it must meet at least one of the following criteria:

1. is associated with events that have made a significant contribution to the broad patterns of California History and cultural heritage; or
2. is associated with the lives of persons important to our past; or
3. embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value; or
4. has yielded or is likely to yield, information important to prehistory or history.

Historic-era structures older than 50 years are most commonly evaluated in reference to Criterion 1 (important events), Criterion 2 (important persons), or Criterion 3 (architectural value). To be considered eligible under these criteria, the property must retain sufficient integrity to convey its important qualities. Integrity is judged in relation to seven aspects including: location, design, setting, materials, workmanship, feeling, and association. Prehistoric and historic-era archaeological resources are commonly evaluated with regard to Criterion 4 (research potential).

Guidelines for the implementation of CEQA define procedures, types of activities, persons, and public agencies required to comply with CEQA. Section 15064.5(b) prescribes that project effects that would "cause a substantial adverse change in the significance of an historical resource" constitute significant effects on the environment. Substantial adverse changes include both physical changes to the historical resource or to its immediate surroundings.

Archaeological Resources

Section 21083.2 of the CEQA guidelines also defines "unique archaeological resources" as "any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and show that there is a demonstrable public interest in that information.
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person."

This definition is equally applicable to recognizing "a unique paleontological resource or site." CEQA Section 15064.5 (a)(3)(D), which indicates "generally, a resource shall be considered historically significant if it has yielded, or may be likely to yield, information important in prehistory or history," provides additional guidance.

National Historic Preservation Act Section 106

Under Section 106 of the NHPA, when a federal agency is involved in an undertaking, it must take into account the effects of the undertaking on historic properties (36 Code of Federal Regulations (CFR) Part 800). Compliance with Section 106 requires that agencies make an effort to identify historic properties that might be affected by a project.

The National Register of Historic Places (National Register) defines a historic property as a district, site, building, structure, or object significant in American history, architecture, engineering, archaeology, and culture, and that may be of value to the nation as a whole or important only to the community in which it is located.

ASSESSMENT METHODOLOGY

Archival Research and Records Search

Far Western requested a records search for the APE at the Northwest Information Center in Rohnert Park, California. The supplemental records for the APE plus a one-half mile buffer indicated 71 previous cultural resources studies within the APE. Of these studies, 33 have occurred within the past 20 years, 10 of which appear to have included cultural resources survey of the APE, covering more than half of the Olive Avenue APE and the entire Pacheco Creek APE.

Olive Avenue APE

The records searches indicated no previously recorded archaeological sites within the Olive Avenue APE and one built environment resource, the Northwestern Pacific Railroad. Thirteen resources have been documented within one-half mile of the records search buffer, including six archaeological sites and seven built environment resources. The nearest archaeological site is situated 200 meters away from the Olive Avenue APE. The seven built environment resources consist primarily of railroad features and commercial/industrial operations. A previous study by JRP Historical Consulting concluded that the Northwestern Pacific Railroad does not appear to be eligible for listing in the National Register or California Register as a historic district (JRP 2004).

During the time the Archaeological Report was being prepared, a new precontact archaeological resource was identified in the commercial lot within the Olive Avenue APE, which was identified during a pedestrian survey for the Village at Novato Mixed-Use Project. The survey identified one isolated find (chert flake) in a location that intersects the Olive Avenue APE north of Olive Avenue, and a cluster of artifacts approximately 80 meters away, in a location outside of the Olive Avenue APE. No DPR site records for these resources were provided as part of the 2024 records search but locational information was provided by Rincon (Foster 2022).

Pacheco Creek APE

The records searches indicated no previously recorded cultural resources within the APE and eight resources within the one-half mile search buffer. The resources include three precontact archaeological sites, four buildings and structures contributing to a historic district, and one historic-era structure.

Buried Site Sensitivity Assessment

Because Native American archaeological sites are sometimes buried by accumulated sediments, they cannot be identified by conventional archaeological surface surveys. While it is hard to predict exactly where buried sites may be located, the potential for an area to have buried

archaeological sites can be estimated using models that account for conditions which are likely to host archaeological sites. For example, most sites tend to be located on a relatively level landform located near present or former water sources such as stream channels, perennial stream confluences, and former lakes, springs, or wetlands. In addition, many lowland areas of California have a general "geologic" potential to contain buried site because they contain sediments that were deposited after Native people first entered and occupied the region.

Using data such as the age of the landform and proximity to water sources, Far Western implemented a model to determine the potential for buried sites within the APE. The modeling indicated a moderate potential for buried sites within the Olive Avenue APE and a high potential for buried sites within the Pacheco Creek APE.

Field Survey

An intensive pedestrian survey of the Olive Avenue APE was conducted by Far Western on March 17, 2021. An additional survey for the updated APE was conducted by Far Western on January 10, 2024. The entirety of the APE was accessible, resulting in 100 percent survey coverage. However, portions of ground within the APE were significantly obstructed by landscaping, dense grass, and asphalt or imported gravel. When visible, exposed soils were carefully examined for the presence of cultural materials. No new precontact resources were identified within the Olive Avenue APE, however a previously undocumented historic-era ditch was identified and recorded within the APE.

An intensive pedestrian field survey of the Pacheco Creek APE was conducted by Far Western on February 11, 2022. An additional survey for the updated APE was conducted by Far Western on January 10, 2024. Accessibility was limited due to dense vegetation, especially along the creek, resulting in approximately 57 percent survey coverage. One newly identified historic-era cultural resource was recorded within the Pacheco Creek APE, comprising five historic-era features that appear to be associated with the Hamilton Army Airfield. No precontact sites within the APE were observed.

DISCUSSION OF IMPACTS

a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

Less-than-Significant Impact

Olive Avenue

The results of the records search found one previously recorded precontact artifact (chert flake) and one built environment resource within the Olive Avenue APE, the Northwestern Pacific Railroad (now the SMART tracks). The Northwestern Pacific Railroad was previously evaluated by JRP Historical Consulting, who concluded that the railroad did not appear to be eligible for listing in the National Register or California Register.

Far Western newly identified a historic-era drainage ditch that has been present since at least 1952, based on historic aerial imagery. Far Western evaluated the ditch for its potential eligibility for listing on the National Register and California and found that it does not meet National or California Register criteria for inclusion, and therefore, is recommended as ineligible for listing on the National Register and California Register. Furthermore, due to past disturbance of the area, the Olive Avenue Site was determined to have a low sensitivity for subsurface

historic era-resources. As such, project work at the Olive Avenue Site would not cause a substantial adverse change in the significance of a historical resource. No impact would occur.

Pacheco Creek Habitat Enhancement Site

The results of the records search found no previously recorded cultural resources or built environment resources within the Pacheco Creek APE.

During the field survey, one historic-era resource was identified, comprising five features that appear to be associated with the Hamilton Army Airfield. This site was formally recorded and evaluated for its potential eligibility for listing on the National and California Registers. It was found that it does not meet National or California Register criteria for inclusion, and therefore, the resource was recommended as ineligible for listing on both registers. Furthermore, the subsurface site assessment for historic-era archaeological resources found that the APE is not sensitive for encountering such archaeological deposits. As such, project work at the Pacheco Creek APE would not cause a substantial adverse change in the significance of a historical resource. No impact would occur. The impact would be less than significant.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Less-than-Significant Impact with Mitigation Incorporated

Olive Avenue

The results of the records search found no previously documented archaeological resources within the Olive Avenue Site. However, during the time the Archaeological Report was being prepared, a pedestrian survey for a nearby project identified a single chert flake in a location that intersects with the Olive Avenue APE north of Olive Avenue, and a cluster of artifacts approximately 80 meters away, in a location outside of the Olive Avenue APE.

The buried sites sensitivity assessment indicated a moderate potential for the Olive Avenue Site to contain buried archaeological resources. Archaeological monitoring is recommended to ensure the identification of any subsurface archaeological resources that may be encountered within the Olive Avenue Site. This monitoring is presented below as part of Mitigation Measure CUL-1.

Pacheco Creek Habitat Enhancement Site

The results of the records search found no previously documented archaeological resources within the Pacheco Creek APE. The buried sites sensitivity assessment indicates a high potential for the Habitat Enhancement Site to contain buried archaeological resources. It is recommended that the presence or absence of archaeological resources be confirmed through shallow hand excavation testing, which is presented below as part of Mitigation Measure CUL-1.

With implementation of Mitigation Measure CUL-1, potential project impacts would be reduced to a less-than-significant level.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less-than-Significant Impact with Mitigation Incorporated

There are no known human remains located within the project sites. However, although unlikely, ground-disturbing activities during construction have the potential to impact unknown human remains which may be present within the sites. The project would implement Mitigation Measure

CUL-2, which contains proper procedures that must be followed in the event of discovery of human remains on the project sites. With implementation of Mitigation Measure CUL-2, the project would not disturb any human remains, including those interred outside of dedicated cemeteries. The impact would be less than significant with mitigation incorporated.

MITIGATION MEASURES

Mitigation Measure CUL-1/TCR-1. Cultural and Tribal Resources Monitoring and Testing Plan

A Cultural/Tribal Resources Monitoring and Testing Plan shall be prepared prior to the start of ground-disturbing activities at either of the project sites (Pacheco Creek or Olive Avenue). The Plan shall include protocols to be implemented in the event that an unanticipated archaeological resource and/or resource that may be considered a tribal cultural resource is identified during land disturbances or construction. The Plan shall be prepared under the direction of an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology. The Plan shall be reviewed by the City and Graton Rancheria and shall include shallow hand excavation testing at the Pacheco Creek site and archaeological and tribal monitoring at Olive Avenue. Additionally, the Plan shall outline the appropriate treatment of the resource in coordination with Graton Rancheria. Examples of appropriate treatment for tribal cultural resources may include, but are not limited to, protecting the cultural character and integrity of the resource, protecting traditional use of the resources, protecting the confidentiality of the resource, or heritage recovery. Based on the project schedule, monitoring and testing may occur during separate project phases and the appropriate protocols for each phase shall be detailed in the plan. A cultural resources awareness and sensitivity training shall be provided for all project personnel prior to the start of any construction and habitat enhancement activities and will be further described in the plan. Department of Parks and Recreation forms (DPR 523) will be prepared for all new discoveries during testing and monitoring and submitted to the Northwest Information Center and Graton Rancheria.

Mitigation Measure CUL-2/TCR-2. Accidental Discovery of Human Remains and Funerary Items

If human remains are encountered, excavation or disturbance of the location shall be halted in the vicinity of the find, and the City, Graton Rancheria, and the Marin County coroner shall be contacted. The procedures for the treatment of discovered human remains are outlined in California Health and Safety Code §§ 7050.5 and 7052 and PRC § 5097. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code § 7050.5[b]). If the coroner determines the remains are Native American, the coroner must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code § 7050[c]). The City shall contact the Most Likely Descendent (MLD), as determined by the NAHC, regarding the remains. The MLD, in cooperation with the City, shall determine the ultimate disposition of the remains and any associated funerary items.

3.2.6 Energy

Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Power in the City is provided by Marin Clean Energy and Pacific Gas and Electric (PG&E). Marin Clean Energy is a public, non-profit clean electricity provider that has been the City's default electricity provider since September 2016 (City of Novato "Marin Clean Energy"). Customers may opt out of Marin Clean Energy services and elect PG&E as their electricity provider. PG&E continues to be responsible for transmitting and distributing electricity through the grid, maintaining infrastructure, billing customers, and providing customer services (City of Novato "Marin Clean Energy").

REGULATORY SETTING

Climate Change Action Plan

In December 2009, the City adopted a Climate Change Action Plan (CCAP). The CCAP presents goals and implementation measures identifying how the City will achieve (or exceed) its greenhouse gas (GHG) emissions reduction target. The CCAP goals and associated measures, also referred to as climate change mitigation measures, are divided into the sectors of energy use, green building, water conservation, transportation, land use, and waste. In addition, the CCAP provides goals and measures for climate change adaptation and plan implementation. Many of these goals and measures echo those of the City's General Plan.

In order to allow for more regular updates to the City's climate goals, policies, and programs, in July 2023, the City initiated the process of developing a stand-alone Climate Action Plan (City of Novato 2009).

DISCUSSION OF IMPACTS

a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less-than-Significant Impact

Project construction would involve the use of vehicles, heavy construction equipment, and energized tools. Operation of the project at the Olive Avenue and Habitat Enhancement Sites

would not require energy consumption and maintenance would involve the same activities as under existing conditions. Fossil fuels and electricity would be used during the approximately eight-month construction period to complete the Olive Avenue widening, utilities undergrounding, and culvert installation. Project activities at the Habitat Enhancement Site would span over two years; however, no heavy equipment would be needed for weed management and planting activities. Fuel use during construction activities would be consistent with typical construction and manufacturing practices and would not require excessive or wasteful use of energy that could lead to potentially significant environmental impacts. The impact would be less than significant due to the temporary consumption of energy during construction.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact

As noted above, the City's CCAP includes measures to reduce GHG emissions covering energy uses, green building, water conservation, transportation, land use, and waste reduction. These measures are applicable to land-use based projects and City policies and programs. There are no measures that relate to construction of a small infrastructure and habitat enhancement project. The project would not conflict with the City's CCAP. No impact would occur.

3.2.7 Geology and Soils

Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The project sites are located in a seismically active region due to its proximity to the active margin of the North American and Pacific Plates. The nearest potentially active fault is the Burdell Mountain fault, which is approximately 1.7 miles northeast of the Olive Avenue Site and approximately 3.7 miles north of the Habitat Enhancement Site (USGS 2024b). No known active faults run through the project sites; therefore, the potential for surface rupture resulting from the movement of nearby major faults is low.

DISCUSSION OF IMPACTS

a-i) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Less-than-Significant Impact

The project sites are not located within an Alquist-Priolo Earthquake Zone of Required Investigation (USGS 2024b). The nearest potentially active fault is the Burdell Mountain fault, which is approximately 1.7 miles northeast of the Olive Avenue Project site and approximately 3.7 miles north of the Habitat Enhancement Site (USGS 2024b). Because the project sites are not located on or within an active or potentially active fault zone, the potential for surface fault rupture is considered low. Therefore, the potential impact from fault rupture is considered less than significant.

a-ii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking?

Less-than-Significant Impact

The project would underground existing electrical, cable and telephone utilities; widen Olive Avenue; construct underground stormwater drainage improvements; and enhance riparian habitat. The project does not include aboveground structures that would introduce a significant risk of life or property due to seismic ground shaking. The project does not include potable water or gas utility lines that could introduce risk to life or property if ruptured during ground shaking. Severe ground shaking has the potential to cause injury to construction workers during construction; however, no active or potentially active fault zones underlie the project sites. The potential for strong seismic shaking during the temporary construction window is very low because the project sites are not located in an active fault zone. Precautionary measures including adherence to State-mandated safety standards, including federal Occupational Safety and Health administration (OSHA) regulations (29 CFR 1910.120) and California OSHA (Cal/OSHA) regulations (8 CCR Title 8, Section 5192) during construction would minimize hazards to construction workers associated with strong seismic ground shaking. The impact would be less than significant.

a-iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction?

Less-than-Significant Impact

Liquefaction primarily occurs in relatively loose, saturated, cohesionless soils that lose their strength and become incapable of supporting the weight of overlying soils or structures when

subject to earthquake stresses. Liquefaction primarily occurs within loose, granular, saturated soil materials. The project would involve underground existing electrical, cable and telephone utilities, widen Olive Avenue, construct underground stormwater drainage improvements, and enhance riparian habitat. The project does not include aboveground structures that would introduce a significant risk of life or property due to liquefaction. The project does not include potable water or gas utility lines that could introduce risk to life or property if installed in potentially liquefiable soils. The project site is not located in a liquefaction zone identified by the CGS (CGS 2024). The impact would be less than significant.

a-iv) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides?

No Impact

The project sites are located on and surrounded by flat land. According to the City of Novato General Plan Map CW-5 (Landslide Hazard Areas), the Project sites are not located on lands with landslide potential (City of Novato 2020a). No impact related to landslides would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less-than-Significant Impact

Project construction would involve excavation, grading, trenching, and vegetation removal, which would temporarily disturb soils on the project sites. If erosion control BMPs are not implemented, construction work could result in substantial soil erosion. As described further in *Section 3.2.10, Hydrology and Water Quality,* the project would implement Mitigation Measure HYDRO-1, which requires that best management practices (BMPs) be implemented for erosion and sediment control and pollution prevention throughout construction work at the Olive Avenue Site and the Habitat Enhancement Site. Erosion control BMPs may include, but are not limited to, timely revegetation of graded areas, the use of hydroseed and hydraulic mulches, and installation of erosion control blankets. Sediment control BMPs may include, but are not limited to, temporary detention basins, dams, or filters to reduce entry of suspended sediment into the storm drain system and watercourses, and installation of construction entrances to prevent tracking of sediment onto adjacent streets. Following construction, the Olive Avenue Site would be developed with paved areas and landscaping; and the Habitat Enhancement Site would be restored with riparian vegetation. With the implementation of the proposed erosion and sediment BMPs, the project's impact would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

No Impact

Discussion regarding landslides and liquefaction is included in Impact a) and b) above. Lateral spreading is the lateral movement of gently to steeply sloping, saturated soil deposits caused by earthquake-induced liquefaction. The project sites are located on and surrounded by relatively flat lands, there would be no impact related to lateral spreading. Subsidence is defined as the sinking of a large area of ground surface where the material is displaced vertically downward, with little or no horizontal movement. Land subsidence is most often caused by human activities such as the removal of subsurface water. The project would include widening a roadway, undergrounding utilities, improving drainage, and enhancing habitat. The project would not

require the removal of subsurface water or the construction of buildings. The soil within the Olive Avenue site would be compacted during construction, eliminating the possibility of shallow subsidence. No impact related to subsidence would occur.

d) Be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?

Less-than-Significant Impact

Expansive soils are those that contain minerals such as smectite clays that are capable of absorbing water. These soils are prone to expansion and shrinkage due to variation in water volume. According to the City of Novato Existing Conditions Report, Figure 10-4 (Expansive Soils), the Olive Avenue Site has no potential for soil expansion (City of Novato 2014). The Habitat Enhancement Site has moderate potential for soil expansion; however, the project would not introduce any new structures in this area that would be at risk of causing substantial direct or indirect risks to life or property. Work at the Habitat Enhancement Site would only consist of vegetation removal and other habitat enhancement work. Therefore, the project would not create any risks to life or property due to expansive soils. The impact would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact

The project would not include any septic tanks or additional alternative wastewater disposal systems. No impact would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-than-Significant Impact

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. Figure 4.4-2 of the Draft EIR prepared for the City's 2035 General Plan update shows areas of paleontological sensitivity within the City. Both the Olive Avenue Site and Habitat Enhancement Site are within an area of low paleontological sensitivity (City of Novato 2020b). In addition, work at the Olive Avenue Site would be primarily within the existing roadway and developed/disturbed areas; therefore, it is extremely unlikely to uncover unknown paleontological resources at this site. Work at the Habitat Enhancement Site would not include grading or excavation work that could encounter unknown paleontological resources; therefore, work at this site would have no impact related to paleontological resources. The project would not directly or indirectly destroy a unique paleontological resource or geologic feature. The impact would be less than significant.

3.2.8 Greenhouse Gas Emissions

Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Greenhouse gases (GHGs) are recognized by wide consensus among the scientific community to contribute to global warming/climate change and associated environmental impacts. The most common GHGs released from human activity are carbon dioxide, methane, and nitrous oxide (OPR 2008). The primary sources of GHGs are vehicles (including planes and trains), energy plants, and industrial and agricultural activities (e.g., dairies and hog farms).

In the United States, the major sources of GHG emissions are transportation, electricity generation, and industrial activities (U.S. EPA 2022). These three sources are also the top contributors of GHG emissions in California (CARB 2024).

Global Warming Solutions Act

Assembly Bill (AB) 32, adopted in 2006, established the Global Warming Solutions Act of 2006 which requires the State to reduce GHG emissions to 1990 levels by 2020. In 2016, Senate Bill (SB) 32 was signed into law, amending the California Global Warming Solution Action. SB 32 and Executive Order B-30-15 require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to express the 2030 statewide target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 MMTCO2e.

Bay Area 2017 Clean Air Plan

The 2017 CAP is the most recently adopted air quality plan in the Bay Area. The CAP focuses on two related BAAQMD goals: protecting public health and protecting the climate. To protect the climate, the CAP includes control measures designed to reduce emissions of methane and other super-GHGs that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The City of Novato and other jurisdictions in the San Francisco Bay Area Air Basin utilize

the thresholds and methodology for assessing GHG impacts developed by BAAQMD within the CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

City of Novato's 2009 Climate Change Action Plan

The City of Novato's 2009 CCAP presents goals and implementation measures identifying how the City will achieve (or exceed) its GHG emissions reduction target. The CCAP goals and associated measures, also referred to as climate change mitigation measures, are divided into the sectors of energy use, green building, water conservation, transportation, land use, and waste. In addition, the CCAP provides goals and measures for climate change adaptation and plan implementation. Many of these goals and measures echo those of the City's General Plan.

DISCUSSION OF IMPACTS

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less-than-Significant Impact

BAAQMD has adopted thresholds of significance that were designed to establish the level at which GHG emissions would cause significant environmental impacts under CEQA. The thresholds are included in the 2022 CEQA Air Quality Guidelines (BAAQMD 2022). The City's General Plan discusses GHGs but does not contain specific policies pertaining to GHG emissions.

The proposed project would generate minor GHG emissions during construction activities resulting from emission sources such as small construction equipment and worker/volunteer vehicles. Project construction activities site would result in a temporary increase in GHG emissions, including exhaust emissions from on-road haul trucks, worker commute vehicles, and off-road heavy duty equipment. Project construction activities would be less intensive than traditional land use development that requires a larger fleet of earthmoving activities. Project construction activities would include trenching for utilities, pipeline and culvert installation, road widening, and vegetation removal and planting. No gas-powered equipment would be used for vegetation removal and planting activities at the Habitat Enhancement Site. Construction would last approximately eight months at the Olive Avenue Site and for two years at the Habitat Enhancement Site. Project emissions during construction would not be a considerable contribution to the cumulative GHG impact, given that construction would be temporary and would not require a large fleet of earthmoving equipment. Construction of the project would not impede implementation of AB 32, or the framework outlined in the 2017 Scoping Plan. Although project construction may benefit from implementation of some of the State-level regulations and policies that will be implemented, such as the Phase 2 heavy-duty truck GHG standards proposed to be implemented within the transportation section, the project would not impede the State in meeting the AB 32 GHG reduction goals. The impact of construction GHG emissions would be less than significant.

With respect to project operation, the segment of Olive Avenue proposed for widening is currently constricted and impedes smooth traffic flow. In addition, no sidewalk or pathway for bicycles is available along the north side of the street through the Olive Avenue Site. The project would widen the street to permit smoother vehicle movement through the site and would also install a multi-modal pathway along the north side of the street. Operation of the project at the Olive Avenue Site would not generate GHGs, either directly or indirectly, that would have a

significant impact on the environment. No GHGs would be generated during project operation at the Habitat Enhancement Site on Pacheco Creek. Therefore, the impact of operational GHG emissions would be less than significant.

b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact

The project sites fall within the planning jurisdiction of the BAAQMD 2017 CAP, the City's CCAP, and the City's General Plan. As discussed in *Section 4.2.3, Air Quality*, the project would be consistent with applicable control measures from the 2017 CAP. The project would not conflict with any other applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. No impact would occur.

3.2.9 Hazards and Hazardous Materials

Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a), b) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less-than-Significant Impact

Project construction would involve the use and transport of typical construction-related hazardous materials such as fuels, lubricants, adhesives, and solvents. Heavy equipment would be staged and refueled within the project staging areas. Construction activities would be required to comply with numerous hazardous materials regulations and implement BMPs to ensure that hazardous materials are handled properly and do not pose a threat to worker safety or the environment. Workers who handle hazardous materials are required to adhere to all OSHA and Cal/OSHA health and safety requirements. Hazardous materials must be transported to and from the project area in accordance with the Resource Conservation and Recovery Act (RCRA) and U.S. Department of Transportation regulations and disposed of in accordance with RCRA at a facility that is permitted to accept the waste.

Although a spill or leak of hazardous materials is unlikely, a spill or leak that is not handled properly would have the potential to contaminate the environment. As discussed in *Section 3.2.10, Hydrology and Water Quality,* project contractors would be required to implement construction site BMPs in accordance with Mitigation Measure HYDRO-1 (see *Section 3.2.10, Hydrology and Water Quality*). These BMPs include maintaining a list of the hazardous materials (including petroleum products) proposed for use during construction and a description of appropriate spill response and control measures, equipment inspections, equipment storage, and protocols for responding immediately to spills.

With implementation of Mitigation Measure HYDRO-1 and compliance with existing regulations, the potential impact related to routine transport and accidental releases of hazardous materials would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact

There are no schools within one-quarter mile of the project sites. The nearest schools are Olive Elementary School approximately 0.5 mile east of the Olive Avenue project site and Novato Charter School approximately 0.35 south of the Habitat Enhancement Site. The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing school. No impact would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less-than-Significant Impact

A search of the SWRCB's GeoTracker Database and the Department of Toxic Substances Control's EnviroStor database indicated that there are multiple sites included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 within the

vicinity of the project sites (SWRCB 2024b, DTSC 2024). Within the immediate vicinity of the Olive Avenue Site (approximately 1,000 feet), there are seven listed cleanup sites, including the following:

- A & A Gas Station, 7474 Redwood Boulevard
- Big 4 Rents, Inc., 875 Olive Avenue
- Former Grand Auto, 7427 Redwood Boulevard
- Shell Station, 7473 Redwood Boulevard
- Unocal, 7455 Redwood Boulevard
- Novato Unified School District Maintenance Facility, 819 Olive Street
- H&J Tire, 7426 Redwood Boulevard

Six of these sites are in case-closed status and one site is eligible for closure, indicating that remediation activities are complete. Therefore, such sites would not pose an environmental hazard to the project. The one open listing is for Unocal at 74555 Redwood Boulevard, which is an open remediation Leaking Underground Storage Tank cleanup site. This site is located approximately 250 feet southwest of the Olive Avenue Site and project work would not disturb any contamination that may be found on this site. Therefore, the Olive Avenue Site is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The impact would be less than significant.

Within 1,000 feet of the Habitat Enhancement Site, there are three listed cleanup sites, including the following:

- Hamilton GSA Phase I, Highway 101, three miles north of Lucas Valley Road
- Hamilton Elementary School Site, 5530 Nave Drive
- Novato Department of Defense Housing, 957 C Street

The Hamilton GSA Phase I site is the former Hamilton Air Force Base, and the listing shows that the remediation activities were completed in 1995. The Hamilton Elementary School site and Novato Department of Defense Housing site are part of the former Department of Defense housing facility operated by the United States Navy at the former Hamilton Air Force Base. The remedial actions were completed in 2001; however, the site remains under land use restrictions. Because remediation activities have been completed at these three sites, they would not pose an environmental hazard to project work at the Habitat Enhancement Site. Further, work at the Habitat Enhancement Site would not involve extensive ground disturbance which could disturb any potential soil contaminants. Therefore, the Habitat Enhancement Site is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The impact would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact

There are no airports within two miles of the Habitat Enhancement Site. The Olive Avenue project site is located within the two-mile referral area boundary for the Marin County Airport at

Gnoss Field (Marin County ALUC 1991). However, the project components at the Olive Avenue project site are subsurface, and the construction and operation of Olive Avenue would not include buildings intended for human occupancy or other aboveground structures. The project would not conflict with Marin County Airport Land Use Plan. Therefore, the project would not result in a safety hazard for people residing or working in the project area due to its proximity to an airport. No impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact

The City of Novato Emergency Operations Plan establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the City. The City and the Novato Fire Protection District operate a joint Emergency Operations Center in the Novato Fire Administration Building. The Emergency Operations Plan does not designate specific evacuation routes within the City (City of Novato 2009). Vegetation removal and planting activities at the Habitat Enhancement Site would not require lane closures and would not block any roadways nearby. Construction of the improvements to Olive Avenue would require temporary partial lane closures along the roadway. During construction, the Olive Avenue Site would be maintained to allow traffic flow in both directions, including emergency vehicles. Because Olive Avenue would remain partially open during construction, and because the Emergency Operations Plan does not designate specific evacuation routes within the City, the construction-related impact would be less than significant. Once construction work at the Olive Avenue Site is complete, the operational capacity of the roadway would be improved, resulting in less traffic congestion and better access for emergency vehicles and evacuation. Therefore, no operational impact would occur.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact

As discussed in *Section 4.2.20, Wildfire*, the proposed project is located within a Local Responsibility Area for wildfire management. The project sites are not within any area of high fire hazard as designated by CAL FIRE or by the City of Novato (CAL FIRE 2024). Project work at the Olive Avenue Site would include road improvements and utility undergrounding, which would result in a lessened wildfire hazard in the long term. This site is in a highly urbanized setting; therefore, construction work would not pose risk of wildfire ignition as areas around the Olive Avenue Site are primarily paved. Work at the Habitat Enhancement Site would consist of habitat improvements such as removal of invasive species and revegetation with native species. This work would not also result in a reduced wildfire hazard because it would thin existing overgrown vegetation in the site area. As discussed in above in *Impact f)*, the project would not obstruct any evacuation routes that may be used by residents to evacuate in case of wildfire. No impact would occur.

3.2.10 Hydrology and Water Quality

Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	☐	☒	☐	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☒	☐	☐
iii) create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or	☐	☒	☐	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☒	☐	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The project sites are located within the San Francisco Bay Basin; therefore, the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) applies to the project. The Basin Plan identifies beneficial water uses, water quality objectives to protect the designated beneficial water uses, and strategies and time schedules to achieve water quality objectives. Water quality objectives for surface waters encompass features such as bacteria level, sediment, pH, and

temperature. Strategies include Total Maximum Daily Loads required by the Clean Water Act for waterbodies where water quality standards are not currently met.

Stormwater runoff from the Olive Avenue Site ultimately flows to Rush Creek, Black John Slough, and the Petaluma River. Stormwater runoff from the Habitat Enhancement Site flows to the Pacheco Creek. Rush Creek, Black John Slough, and Pacheco Creek are not currently listed as impaired water bodies; however, the Petaluma River is listed as impaired for diazinon, nutrients, pathogens, sedimentation/siltation, and trash (SWRCB 2024a). The tidal portion of the Petaluma River is also listed as an impaired water body for nickel.

DISCUSSION OF IMPACTS

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less-than-Significant Impact with Mitigation Incorporated

The Basin Plan sets narrative and numerical water quality objectives for the North Coast Hydrologic Planning Area. Numerical objectives typically describe pollutant concentration, physical and chemical conditions of water, and the toxicity of water to aquatic organisms. Because the project would disturb under one acre of soil at each site, the project is not required to obtain coverage under SWRCB Order No. 2022-0057-DWQ, Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction and Land Disturbance Activities. Therefore, the project would not conflict with any waste discharge requirements.

Stormwater runoff from the Olive Avenue Site flows to Rush Creek, Black John Slough, and the Petaluma River. Excessive runoff from the site could potentially carry pollutants into nearby waterbodies and thus degrade water quality, which is a potentially significant impact. As described in the Novato Code of Ordinances, Chapter VII, Section 7-4, the City of Novato requires that any person implementing construction activities within Novato include erosion and sediment controls and pollution prevention practices to reduce urban runoff pollution. In compliance with the City's Code of Ordinances, the project would implement Mitigation Measure HYDRO-1 to reduce impacts associated with stormwater runoff to a less-than-significant level. Mitigation Measure HYDRO-1 requires that erosion and sediment control BMPs, as well as pollution prevention and spill control practices, be implemented throughout construction at the Olive Avenue Site and Habitat Enhancement Site. Such measures would ensure that construction work would not violate any water quality standards or otherwise degrade surface or groundwater quality.

In addition, Mitigation Measure BIO-5 would be implemented at the Olive Avenue Site throughout construction. Mitigation Measure BIO-5 requires that general avoidance and minimization measures be implemented to minimize indirect impacts to stormwater runoff. The project must adhere to all BMPs as identified by the RWQCB and CDFW, which may include measures such as checking equipment and vehicles for leaks, cleaning vehicles before arriving on-site, locating staging areas outside of channel banks, avoiding fueling and cleaning of vehicle and equipment near waterways, and others. Implementation of this measure would ensure that project work at the Olive Avenue Site would not result in a violation of water quality standards or waste discharge requirements or otherwise degrade surface or groundwater quality.

Stormwater runoff from the Habitat Enhancement Site flows to Pacheco Creek. Excessive runoff from the site could potentially carry pollutants into nearby waterbodies and thus degrade water quality, which is a potentially significant impact. To avoid and minimize impacts to waterbodies

from stormwater runoff, Mitigation Measure HYDRO-1 and BIO-6 would be implemented at the Habitat Enhancement Site throughout construction. Measure HYDRO-1 requires that erosion and sediment control BMPs and pollution prevention practices be implemented throughout construction. Mitigation Measure BIO-6 requires that general avoidance and minimization measures shall be implemented to minimize indirect impacts of stormwater runoff. The project must adhere to all BMPs as identified by the RWQCB and CDFW, which may include measures such as checking equipment and vehicles for leaks, covering soil stockpiles when not in active use, covering trucks hauling soil and other loose materials, rinsing equipment away from areas which could allow runoff to enter the creek, refueling of equipment outside of the top-of-bank area, and others. Implementation of these measures would ensure that project work at the Habitat Enhancement Site would not result in a violation of water quality standards or waste discharge requirements or otherwise degrade surface or groundwater quality.

With implementation of Mitigation Measure HYDRO-1, BIO-5, and BIO-6, the project would not result in violation of water quality standards or waste discharge requirements and would not degrade surface or groundwater quality. The impact would be less than significant with mitigation incorporated.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less-than-Significant Impact

The project sites are not underlain by a groundwater basin that is designated as a medium or high priority by the Sustainable Groundwater Management Act (CDWR 2024). Water needed for dust suppression and plant watering during construction would be obtained from an existing source. Groundwater may comprise a portion or all of the water used during construction; however, the quantity of water required would be limited to only what is needed to suppress fugitive dust and water newly planted vegetation. The potential use of groundwater for project construction activities would not substantially impact groundwater supplies and groundwater recharge as the project sites are not underlain by a medium or high priority groundwater basin. As discussed in the Project Description, construction activities at the Olive Avenue project site may require temporary dewatering. Dewatering would involve the pumping of groundwater which would be stored in a Baker tanks or similar water storage system and allowed to infiltrate into the ground or discharged in the local storm drain system. Such temporary dewatering would have at most a very small effect on localized water levels in the immediate vicinity of Olive Avenue. No substantial deficit in aquifer volume or lowering of water levels would occur. Impacts would be less than significant.

Following construction, the project would not include the pumping of groundwater and would not result in substantial amounts of new impervious surfaces that would interfere with groundwater recharge. Therefore, the project would have a less-than-significant impact on groundwater supply and recharge.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (iii) create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or

provide substantial additional sources of polluted runoff; or (iv) impede or redirect flood flows?

Less-than-Significant Impact with Mitigation Incorporated

Olive Avenue Site

Project work at the Olive Avenue Site would reconfigure the existing roadway which would result in the addition of 0.67 acres of impervious surface area. While this change would alter drainage patterns around the site, part of the project work would include adding culverts in order to convey storm flows during 25-year storm events which would alleviate localized flooding along this segment of Olive Avenue. As such, project work at the Olive Avenue Site would result in a long-term beneficial impact related to on- and off-site flooding by improving the stormwater drainage infrastructure. Therefore, project work at the Olive Avenue Site would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or impede or redirect flood flows. No impact would occur.

During construction, the project could generate erosion due to grading and excavation activities; however, as stated in Mitigation Measure HYDRO-1, the project would implement erosion and sediment control BMPs and pollution prevention practices to reduce potential impacts to nearby waterbodies. With implementation of this measure, project work at the Olive Avenue Site would not substantially alter drainage patterns in a manner which would result in substantial erosion or siltation on- or off-site. The impact would be less than significant with mitigation incorporated.

Habitat Enhancement Site

Project work at the Habitat Enhancement Site would consist of the removal of invasive vegetation and revegetation with native plant species. The removal of vegetation around Pacheco Creek would alter existing drainage patterns which could temporarily result in increased erosion and siltation until the new vegetation is established. As stated in Mitigation Measure HYDRO-1, the project would implement erosion and sediment control BMPs and pollution prevention practices to reduce potential impacts to nearby waterbodies. In addition, a Riparian Enhancement Plan would be submitted to CDFW for review and approval as part of the Lake and Streambed Alteration Agreement (LSAA), which would ensure that there are sufficient plantings maintained to avoid substantial erosion of the bank. With implementation of these measures, project work at the Habitat Enhancement Site would not alter drainage patterns in a manner which would result in substantial erosion or siltation on- or off-site. Although removal of vegetation may temporarily increase the rate of runoff from the site, all disturbed areas would be revegetated with native species. In addition, erosion and sediment control BMPs would be implemented during construction to ensure that excessive erosion does not occur. Therefore, project work at the Habitat Enhancement Site would not substantially increase the rate or amount of surface water runoff which would result in flooding, exceed the capacity of stormwater drainage systems, or impede flood flows. The impact would be less than significant with mitigation incorporated.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less-than-Significant Impact with Mitigation Incorporated

The Olive Avenue Site is located within Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) number 06041C0277E, effective March 16, 2016, (FEMA 2016). The

FIRM indicates that the Olive Avenue Site is located in an area classified by FEMA as Zone X with 0.2 percent annual chance (or 500-year) flood hazard. The Habitat Enhancement Site is located within FEMA FIRM number 06041C0292E, effective March 16, 2016 (FEMA 2016). The FIRM indicates that areas adjacent to Pacheco Creek at the Habitat Enhancement Site are classified by FEMA as Zone AE and Zone X. Zone AE designates a Special Flood Hazard Area with a one percent annual chance of flooding, while Zone X represents a 0.2 percent annual chance of flooding. The project sites are not within any tsunami or seiche zone (CDOC 2024).

During construction, inundation of the project sites could risk release of pollutants, including sediment and pollutants associated with construction activities (i.e., fuel, lubricants, solvents), into nearby waterways. As described in the Novato Code of Ordinances, Chapter VII, Section 7-4, the City of Novato requires that any person implementing construction activities within Novato include erosion and sediment controls and pollution prevention practices to reduce urban runoff pollution. In compliance with the City's Code of Ordinances, the project would implement Mitigation Measure HYDRO-1 to reduce impacts associated with stormwater runoff to a less-than-significant level. Mitigation Measure HYDRO-1 requires that erosion and sediment control BMPs, as well as pollution prevention practices, be implemented throughout construction at the Olive Avenue Site and Habitat Enhancement Site. Such measures would ensure that inundation of the project sites during construction would not risk pollutant release into nearby waterways.

Once construction is finished, the Olive Avenue Site would be at a reduced risk of inundation due to the stormwater infrastructure improvements being implemented as part of the project. As such, project work at the Olive Avenue Site would result in a long-term decreased risk of pollutant release due to inundation. The Habitat Enhancement Site is located in an area classified as Zone X with minimal flood hazard. Once the area is revegetated, inundation of the Habitat Enhancement Site would not risk release of pollutants. The impact would be less than significant with mitigation incorporated.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact

The project sites are located within the Novato Valley groundwater subbasin, which is monitored by the County of Marin's Groundwater Elevation Monitoring Program. The Novato Valley subbasin is designated as a low priority basin by the Sustainable Groundwater Management Act, and therefore a Groundwater Sustainability Plan is not required for the subbasin (California Department of Water Resources 2023). Therefore, the project would not conflict with any sustainable groundwater management plan.

The applicable water quality control plan is the Basin Plan. As discussed above under *Impact a),* the project would not violate any water quality standards or waste discharge requirements established in the Basin Plan. Therefore, the project would not conflict with any applicable water quality control plan.

The project would not conflict with any applicable water quality control plan or sustainable groundwater management plan. No impact would occur.

MITIGATION MEASURES

Mitigation Measure HYDRO-1. Stormwater Pollution Control Best Management Practices

The project shall implement BMPs for erosion and sediment controls and pollution prevention practices throughout construction work at the Olive Avenue Site and the Habitat Enhancement Site. The City of Novato's Urban Runoff Pollution Prevention Ordinance requires that construction-phase BMPs, such as erosion and sediment controls and pollution prevention practices, shall be implemented. According to the Ordinance, erosion control BMPs may include, but are not limited to, scheduling and timing of grading activities, timely revegetation of graded areas, the use of hydroseed and hydraulic mulches, and installation of erosion control blankets. Sediment control BMPs may include, but are not limited to, temporary detention basins, dams, or filters to reduce entry of suspended sediment into the storm drain system and watercourses, and installation of construction entrances to prevent tracking of sediment onto adjacent streets. Pollution prevention practices may include designated washout areas or facilities, control of trash and recycled materials, tarping of materials stored on-site, and proper location of and maintenance of temporary sanitary facilities. Spill control measures shall also be described in association with a list of the hazardous materials anticipated to be used at each site during construction activities.

3.2.11 Land Use and Planning

Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Olive Avenue is a two-lane major collector roadway that is within a right-of-way area that has no specific General Plan or zoning designation. The area north of Olive Avenue has a General Plan land use designation and zoning classification of General Commercial (CG), Mixed-Use (MU), and Affordable Housing Opportunity (AHO) Overlay. The area south of Olive Avenue is classified as General Commercial. Surrounding land uses include commercial and light industrial uses, with residential uses on the east side of the railroad tracks. The Habitat Enhancement Site has a General Plan land use designation of Parkland and is zoned as Planned District with an F2 District overlay. The F2 District applies to lands within a secondary floodway. Surrounding land uses include parkland, open space, and single-family residences.

DISCUSSION OF IMPACTS

a, b) Physically divide an established community? Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact

The Olive Avenue Site improvements would not divide an established community or conflict with any City plans, policies, or regulations. The project would have added benefits of creating pedestrian and cyclist infrastructure on the north side of the Olive Avenue corridor.

The Habitat Enhancement Site improvements would not physically divide an established community or conflict with any plans, policies, or regulations. The removal of invasive and non-native plant species and the planting of native vegetation will be beneficial to the Pacheco Creek riparian area. None of the proposed improvements at either site would have an impact to Land Use and Planning.

3.2.12 Mineral Resources

Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a, b) ***Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?***

No Impact

The project sites are not located within or near a mineral resource site. Online databases prepared by the CDOC and the California Geological Survey (CGS) indicate that there are four resource sectors in the Novato area (MRZ-2 zones): the Rush Creek Open Space preserve, the Black Point area, Burdell Mountain, and Bowman Canyon (CDOC 2024, CGS 2024). The City's General Plan contains the following relevant policies related to mineral resources:

> Goal ES 19: Recognize designated mineral resources required by the State Division of Mine and Geology as mineral resource sites.

The nearest known mineral resource site is in the Black Point area, located approximately three miles northeast of the Olive Avenue Site. There are no known mineral resources or locally important mineral resources occur at the project sites or in the immediate project areas (City of Novato 2020a). Therefore, the project would not result in the loss of availability of a known mineral resource that would be of Statewide or local significance. No impact would occur.

3.2.13 Noise

Would the project result in:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

BACKGROUND INFORMATION

Noise Concepts and Terminology

Noise is commonly defined as unwanted sound that annoys or disturbs people and can have an adverse psychological or physiological effect on human health. Sound is measured in decibels (dB), which is a logarithmic scale. Decibels describe the purely physical intensity of sound based on changes in air pressure, but they cannot accurately describe sound as perceived by the human ear since the human ear is only capable of hearing sound within a limited frequency range. For this reason, a frequency-dependent weighting system is used and monitoring results are reported in A-weighted decibels (dBA). Decibels and other acoustical terms are defined in Table 1.

A typical method for determining a person's subjective reaction to a new noise is by comparing it to existing conditions. The following describes the general effects of noise on people: 1) a change of 1 dBA cannot typically be perceived except in carefully controlled laboratory experiments; 2) a 3-dBA change is considered a just-perceivable difference; 3) a minimum of 5-dBA change is required before any noticeable change in community response is expected; and 4) a 10-dBA change is subjectively perceived as approximately a doubling or halving in loudness (Charles M. Salter Associates, Inc. 1998).

Table 3. Definition of Acoustical Terms

TERM	DEFINITION
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.
Decibel (dB)	A unit describing the amplitude of sound on a logarithmic scale. Sound described in decibels is usually referred to as sound or noise "level." This unit is not used in this analysis because it includes frequencies that the human ear cannot detect.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, in a manner similar to the frequency response of the human ear, and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
Maximum Sound Levels (Lmax)	The maximum sound level measured during a given measurement period.
Equivalent Noise Level (Leq)	The average A-weighted noise level during the measurement period. For this CEQA evaluation, Leq refers to a 1-hour period unless otherwise stated.
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels to sound levels during the evening from 7:00 to 10:00 p.m. and after addition of 10 decibels to sound levels during the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level (Ldn)	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to sound levels during the night between 10:00 p.m. and 7:00 a.m.
Ambient Noise Level	The existing level of environmental noise at a given location from all sources near and far.
Vibration Decibel (VdB)	A unit describing the amplitude of vibration on a logarithmic scale.
Peak Particle Velocity (PPV)	The maximum instantaneous peak of a vibration signal.
Root Mean Square (RMS) Velocity	The average of the squared amplitude of a vibration signal.

Sources: Charles M. Salter Associates, Inc. 1998. FTA 2018.

General Information on Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Several different methods are used to quantify vibration. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors to vibration include structures (especially older masonry structures) and people (especially residents, the

elderly, and sick). Vibration amplitudes are usually expressed as either Peak Particle Velocity (PPV) or as Root Mean Square (RMS) velocity. PPV is appropriate for evaluating potential damage to buildings, but it is not suitable for evaluating human response to vibration because it takes the human body time to respond to vibration signals. The response of the human body to vibration is dependent on the average amplitude of a vibration event. Thus, RMS is more appropriate for evaluating human response to vibration. PPV and RMS are described in units of inches per second (in/sec), and RMS is also described in vibration decibels (VdB).

ENVIRONMENTAL SETTING

Sensitive Receptors

Sensitive receptors are defined as land uses where noise-sensitive people may be present or where noise-sensitive activities may occur. Examples of noise-sensitive land uses include residences, schools, hospitals, and retirement homes. Examples of noise-sensitive activities are those that occur in locations such as churches and libraries. The primary source of noise at the project sites is from vehicles driving along Olive Avenue and Hamilton Parkway. The nearest sensitive receptors to the Olive Avenue Site are residences along Elmwood Court and townhomes at the southeastern corner of the intersection of Olive Avenue and Railroad Avenue, both of which are within 50 feet of the site. The nearest sensitive receptors to the Habitat Enhancement Site are residences located along Newport Landing Drive, Brookline Drive, and Portsmouth Drive, the nearest of which are approximately 50 feet east of the site.

REGULATORY SETTING

General Plan

The Noise section of the General Plan identifies vehicle traffic from highways and major roadways as the primary source of noise in the City of Novato. U.S. Highway 101 is the most significant source of traffic noise in the City with a Day/Night Average Sound Level (L_{dn}) was 90 dBA. Away from streets carrying substantial through traffic, the City is quiet. Program NS 2b of the General Plan requires the evaluation of noise mitigation measures for projects that would cause a substantial increase in noise.

Municipal Code

Novato Municipal Code Section 19.22.070 (Noise and Construction Hours) exempts construction activities from the exterior noise level limits between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday, and between 10:00 a.m. and 5:00 p.m. on Saturdays. As stated in the Project Description, the project would comply with the allowable hours for construction.

DISCUSSION OF IMPACTS

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less-than-Significant Impact

Noise generated during project construction would primarily be associated with excavation and trenching work associated with undergrounding the utilities and installing the storm drain within

the Olive Avenue roadway. Construction noise at the Habitat Enhancement Site would generate minimal noise.

Policies relating to noise in the City's General Plan are applicable to new, permanent sources of noise. During operation, the noise at the project sites would be limited to noise from vehicles and equipment for occasional maintenance activities and would be similar to existing conditions. As such, the project would not introduce a new, permanent source of noise that would alter the existing ambient noise level at the project sites. Once the project is fully implemented, improvements at the project sites would be "completely compatible" with the noise compatibility guidelines for the corresponding land use. Therefore, the project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project sites in excess of applicable standards. The impact would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact

Construction can result in varying degrees of ground vibration depending on the type of equipment and activity. Construction activities at the Olive Avenue Site may generate intermittent ground vibrations during construction based on the type of equipment being used (e.g., compactor, roller) and the construction method being employed. Any potential vibration would be limited to occurring during construction hours between 7:00 am and 6:00 pm on weekdays, and between 10 am and 5 pm on Saturdays. The project is in a primarily commercial area and is also adjacent to the SMART tracks. Therefore, intermittent vibration during construction would not be substantially noticeable due to the existing noise level in the area and vibration levels from operation of the SMART railway. Once construction is complete, the vibration levels in the project area would be similar to existing conditions. Activities at the Habitat Enhancement Site would not produce any groundborne noise or vibration during construction or operation. Therefore, the impact would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact

Marin County Airport at Gnoss Field is located approximately two miles to the north of the Olive Avenue Site. No airport is within two miles of the Habitat Enhancement Area Site. The project would not include new development that would expose people to excessive airport-related noise levels. No impact would occur.

3.2.14 Population and Housing

Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact

The project would not include construction of new homes and businesses. Widening Olive Avenue would not increase the vehicle or roadway capacity of Olive Avenue because it would not increase travel lanes. The purpose of improving the drainage is to convey storm flows to alleviate localized flooding in the project area along Olive Avenue and would not extend City services such that population growth would be induced. Enhancing habitat along Pacheco Creek would restore the native riparian habitat in the area and would not induce population growth. Therefore, the project would not directly or indirectly induce substantial unplanned population growth. No impact would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact

The project would not displace existing housing or people, would not involve the demolition of residential structures, would not require removal or relocation of any housing, and would not require construction of replacement housing elsewhere. No impact would occur.

3.2.15 Public Services

Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The Novato Fire Protection District provides fire protection and first responder emergency medical services to the City (City of Novato 2020a). The nearest fire station to the Olive Avenue Site is Station No. 61, located approximately 1.1 miles south. Fire Station No. 62 is also located approximately 2.4 miles to the northeast of the site. The nearest fire station to the Habitat Enhancement Site is Station No. 64, located one mile northwest of the site, and Station No. 65, located approximately 1.25 miles south of the site.

The project sites are served by the Novato Police Department located approximately 4.4 miles northwest of the Habitat Enhancement Site and approximately 0.4 miles southwest of the Olive Avenue Site.

There are various schools located within two miles of the project sites. The nearest schools to the Olive Avenue Site include Olive Elementary School (2,000 feet east) and St. Francis Preschool (2,350 feet southwest). Other schools within two miles of the Olive Avenue Site include Our Lady of Loretto School (4,200 feet southwest), Hill Middle School (5,200 feet south), Rancho Elementary School (1.15 miles south), Hummingbirds Collaborative School (1.20 miles west), Miss Sandie's School (1.35 miles west), Good Shepard Middle School (1.40 miles west), Novato High School (1.50 miles south), Marin Christian Academy (1.60 miles south), (Sinaloa Middle School (1.65 miles west), Lynwood Elementary School (1.70 miles south), and San Ramon Elementary School (2 miles northwest). The nearest schools to the Habitat Enhancement Site include Novato Charter School (1,400 feet south), Hamilton School (2,200 feet south), Hamilton Montessori School (2,200 feet southeast), Marin Art School (4,200 feet north), and Loma Verde Elementary School (1.1.4 miles northwest), GATE Academy (1.70 miles south), Winston Preparatory School (1.70 miles south), and Mary E. Silveira Elementary School (1.80 miles southwest).

Parks within two miles of the Olive Avenue Site include Slade Park (4,700 feet southeast), Marion Park (1.00 miles southwest), Pioneer Park (1.15 miles west), and Deer Park (1.25 miles southwest). Novato Skate Park borders the Habitat Enhancement Site to the west. Other parks within two miles of the Habitat Enhancement Site include Clark A Blasdel Park (2,800 feet south), South Hamilton Park (1.00 miles southeast), Wallace Family Park (1.60 miles northwest), and Hillside Park (2.00 miles northwest).

DISCUSSION OF IMPACTS

a) ***Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***

- ***Fire Protection?***
- ***Police Protection?***
- ***Schools?***
- ***Parks?***
- ***Other Public Facilities?***

No Impact

As described in *Section 4.2.14, Population and Housing*, the project would not induce substantial population growth, either directly or indirectly. Incidents requiring law enforcement, fire protection, or emergency medical services could occur during construction. Any incremental increase in demand for these services during construction would be temporary and would not require construction of new or physically altered facilities to maintain service ratios. The project would not result in an increase in the City's student population, and therefore no new or expanded schools would be required. The project would not result in the increased use of existing parks and other public facilities or require the expansion of recreational facilities to maintain acceptable service ratios in the parks. No impact to governmental facilities would occur.

3.2.16 Recreation

Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b)	Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact

As described in *Section 3.2.15, Public Services,* the nearest recreational facility to the Olive Avenue Site is Slade Park, which is approximately 4,700 feet away. Project activities at the Olive Avenue Site would not impact Slade Park or any other park within two miles of the site. Novato Skate Park is situated immediately west of the Habitat Enhancement Site. Project work at the Habitat Enhancement Site would not increase the use of Novato Skate Park or any other parks within two miles of the site. As described in *Section 3.2.14, Population and Housing*, the project would not directly or indirectly induce substantial population growth which could increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. No impact would occur.

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact

The project would not include the construction or expansion of any recreational facilities. No impact would occur.

3.2.17 Transportation

Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b)	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d)	Result in inadequate emergency access?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

Public Transit

Marin Transit Route 654 (Olive-Novato Loop) runs in the westbound direction of Olive Avenue on school day afternoons and is currently the only public transit bus route that operates on the corridor. There are no bus stops for Route 654 within the Olive Avenue site. There are no public transit facilities within the Habitat Enhancement Site.

Bicycle and Pedestrian Facilities

Eastbound and westbound Class II bicycle lanes are located on Olive Avenue east of Railroad Avenue. No bicycle facilities are currently provided within the Olive Avenue site or on Olive Avenue west of Redwood Boulevard. Sidewalks currently exist along portions of the south side of the street, with a gap near the SMART rail line, and no sidewalk facilities exist on the north side. There are no bicycle and pedestrian facilities within the Habitat Enhancement Site.

Regional and Local Access

Regional access to the Olive Avenue Site is provided via U.S. Highway 101. Local access to the Olive Avenue Site is provided by Redwood Boulevard and Olive Avenue. Local access to the Habitat Enhancement Site in the City of Novato is provided by Hamilton Parkway and Aberdeen Road.

REGULATORY SETTING

City of Novato General Plan

The City's General Plan contains the following relevant policies related to transportation:

> **Policy MO 6: Through Traffic on Existing Local Streets.** Reduce through traffic on existing local streets, as needed and feasible, to preserve the peace and quiet of residential areas. Slow traffic through traffic calming techniques where advisable and feasible.
>
> **Policy MO 7: Design for Complete Streets.** Incorporate Complete Streets practices in the planning, design and operation of the City's circulation network, where feasible, consistent with the other objectives, policies and programs of the General Plan.
>
> **Policy MO 8: Enhance Multimodal Infrastructure**. When developing plans for new or retrofitted roadways, incorporate infrastructure as appropriate that enhances multimodal circulation in addition to auto circulation, such as sidewalks, pedestrian paths, bike lanes, pedestrian refuge islands, accessible curb ramps, transit shelters, and pedestrian-scale lighting.
>
> **Policy MO 9: Traffic Safety.** Improve the safety of the roadway system.
>
> **Policy MO 10: Vehicle Parking.** Provide sufficient vehicular parking and discourage installation of excess parking to minimize land area devoted to paved parking.

ASSESSMENT METHODOLOGY

Vehicle Miles Traveled

CEQA Guidelines Section 15064.3 (b)(2) specifies that an analysis of vehicle miles traveled (VMT) shall be assessed when considering potential impacts with land use and transportation projects. The section states "Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less-than-significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements." The publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory,* California Governor's Office of Planning and Research, 2018 (referred to herein as the Technical Advisory) contains additional guidance on the assessment of transportation project VMT. Because the City has not yet adopted standards of significance for evaluating VMT, guidance provided in the Technical Advisory was used in this assessment.

DISCUSSION OF IMPACTS

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less-than-Significant Impact

Marin Transit Route 654 runs in the westbound direction along Olive Avenue on school day afternoons and is currently the only public transit bus route that operates on the corridor. There are no bus stops for Route 654 within the Olive Avenue site. Olive Avenue would remain partially open to vehicle travel during construction; accordingly, the project's impact on bus transit

service would be less than significant. No long-term impact on bus routes would occur beyond improving pedestrian access to bus stops, which would be a beneficial impact

While some construction activities associated with the project would require work within the SMART commuter rail corridor right-of-way, such activities are anticipated to avoid physical disturbance to the rail infrastructure at the Olive Avenue SMART line grade crossing. The City of Novato would obtain an encroachment permit from SMART, which would specify when construction work could occur within the SMART right-of-way, limiting the potential for disruptions to rail service. Therefore, construction activities would have a less-than-significant impact on the performance and safety of rail service. Following construction, the project would not conflict with rail service, and no operational impact would occur.

No bicycle facilities are currently provided within the Olive Avenue site. Sidewalks currently exist along portions of the south side of the street, with a gap near the SMART rail line, and no sidewalk facilities exist on the north side. The project would reconfigure the roadway and provide a multi-modal pathway along the north side of Olive Avenue that would accommodate bicycles and pedestrians, as envisioned in both the *City of Novato General Plan 2035* and the *City of Novato Bicycle/Pedestrian Plan*. In addition, the project would add a 5 foot-wide Class II bicycle lane along the south side of Olive Avenue for eastbound cyclists. The project would fill gaps in both the pedestrian and bicycle networks, maintaining consistency with General Plan Policy MO 6 which calls for Complete Streets practices to be incorporated into the design of City streets, as well as Policy MO 7 which requires incorporation of infrastructure to enhance multimodal circulation when developing plans for retrofitted roadways. The City would be required to comply with California Public Utilities Commission requirements related to pedestrian and bicycle accommodations at railroad crossings, resolving potential impacts related to the performance and safety of bicycle and pedestrian facilities during operation.

Project activities at the Habitat Enhancement Site would not impact any public transit, bicycle, or pedestrian facilities. Proposed improvements at the Olive Avenue site would have a long-term beneficial impact on the transportation system and would implement improvements that are identified in the City's Bicycle/Pedestrian Plan. Therefore, the project would not conflict with any program, plan, policy, or ordinance addressing the circulation system. The impact would be less than significant.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less-than-Significant Impact

The Technical Advisory provides guidance as to the types of transportation projects that "would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis." The characteristics of the project would fall under four of these categories, which include projects with the following characteristics:

- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety – The project would include construction of a new center turn lane and new right-turn lane, each approximately 0.12 mile long and intended to improve safety by providing space for inbound and outbound left turns at side streets and driveways. The center lane and right-turn lane would not serve through traffic or constitute the addition of new through lanes so would be expected to cause no change to VMT or result in induced travel demand.

- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left-, right-, and U-turn pockets, or emergency breakdown lanes that are not utilized as through lanes – The project would add turn lanes and reconfigure lanes at the Redwood Boulevard/Olive Avenue intersection; these changes would be expected to result in no change to VMT or result in induced travel demand.
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow – The project would result in the need to modify signal operation at the Redwood Boulevard/Olive Avenue intersection. Such changes would not be expected to affect VMT or result in induced travel demand.
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way – A key component of the project is to fill existing gaps in the sidewalk and bicycle network along Olive Avenue. The project would include a multi-modal pathway on the north side of the street, a 5-foot-wide Class II bicycle lane along the south side of Olive Avenue, and fill sidewalk gaps on the south side of the street. These improvements are expected to increase travel by non-auto modes and would be expected to have a beneficial impact by reducing VMT.

Operation

Based on this assessment of the project's characteristics in accordance with guidance contained in the Technical Advisory, the project would not be anticipated to measurably increase vehicle travel and would not be subject to an induced travel analysis. Consistent with CEQA Guidelines Section 15064.3(b)(2), because the project is anticipated to result in no measurable increases in VMT, the project may be presumed to cause a less-than-significant transportation impact. As noted in the Technical Advisory, the finding of a less-than-significant VMT impact in the near-term typically also implies a less-than-significant cumulative impact. Therefore, proposed improvements at the Olive Avenue site would also result in a less-than-significant cumulative impact related to VMT.

Project activities at the Habitat Enhancement Site would not induce any operational increase in VMT; therefore, no associated VMT impact would occur. As described in further detail below, construction work at the Habitat Enhancement Site would generate some vehicle trips for hauling of materials and worker commute; however, this impact would be temporary and would not cause a long-term increase in VMT.

The project would not cause a substantial operational increase in VMT; therefore, the project would not conflict with CEQA Guidelines Section 15064.3(b). The impact would be less than significant.

Construction

While construction of the project may involve temporary lane closures, Olive Avenue would remain open during construction, causing no substantive increases to trip lengths that could increase VMT. The project would generate temporary traffic associated with construction vehicle trips and workers. Some of these trips would be associated with heavy vehicles, which are not subject to transportation-focused VMT analyses and impact assessment (the Technical Advisory indicates that VMT analyses shall consider the amount of automobile travel attributable to a project, with automobiles defined as cars and light duty trucks). Any increases in trips and VMT associated with construction worker commutes would be temporary and expected to have little to no effect on regional VMT since these worker trips are already occurring, essentially shifting from jobsite to jobsite rather than constituting new trips in the region. Further, with an

anticipated workforce of only 10 to 20 workers per day, construction workers would likely generate between 20 and 40 daily trips, which is below the 110 daily trips identified in the Technical Advisory to qualify for "small project" VMT screening. For these reasons, the construction impacts associated with the project would be less than significant with respect to VMT.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less-than-Significant Impact

One of the primary goals of the project is to improve safety for all roadway users on Olive Avenue. The project would construct a new center turn lane, which would remove some of the potential vehicle conflicts at driveways associated with automobile left-turn movements onto and off of the street. Sidewalks on both sides of the street would also be added or improved, providing dedicated space for non-auto users of the corridor. The project would also improve sight distance along Olive Avenue by elevating the roadway near the SMART crossing. For these reasons, the project would improve both operation and safety along the Olive Avenue Corridor, resulting in a long-term beneficial impact related to safety.

The California Public Utilities Commission has jurisdiction over the safety of rail crossings in California. Automatic gate arms are already installed at the existing SMART commuter rail crossing on Olive Avenue. As described in the Project Description, the crossing would be constructed in conformance with California Public Utilities Commission General Order 88-B, 72-B, and 75-D for at-grade railroad crossings. Compliance with these regulatory orders would resolve potential hazards related to railroad traffic for motorists, bicyclists, and pedestrians from modifications to the existing railroad crossing. The new driveway to be constructed by the project just west of the SMART crossing would be restricted to right turns in and out, reducing the potential for vehicular conflicts or queuing to occur. The project's potential safety impacts related to the SMART rail crossing would therefore be less than significant.

Project work at the Habitat Enhancement Site would not involve any work within the roadway or changes to the transportation network. Therefore, work at this site would not increase hazards due to geometric features or incompatible uses. No impact would occur.

d) Result in inadequate emergency access?

Less-than-Significant Impact with Mitigation Incorporated

Construction at the Olive Avenue Site is anticipated to last approximately eight months, with activities at the Habitat Enhancement Site occurring over a two-year period. During construction, worker vehicles and haul trucks would access the project area from U.S. Highway 101 and local City streets, including Olive Avenue and Redwood Boulevard. Trips associated with the Habitat Enhancement Site would travel to and from the U.S. Highway 101 corridor via North Hamilton Parkway and Nave Drive. A total of 224 estimated truck haul trips (one-way) are estimated to occur over the duration of the project, and the anticipated construction workforce is estimated to be between 10 and 20 workers per day.

Construction activities at the Olive Avenue site would require closure of roadway shoulder areas and could potentially entail partial or full lane closures. Potential conflicts could occur between slow-moving construction vehicles and automobiles, and temporary partial lane closures could

introduce conflicts among vehicles, bicyclists, and pedestrians. As stated in *Section 2.0, Project Description,* the existing sidewalk on the southern side of Olive Avenue would remain open to pedestrian access during most of the construction. Local businesses on the south side of Olive Avenue would utilize access points along Mulligan Lane when possible. Trader Joe's and other shopping center traffic would remain accessible via the driveway at Redwood Boulevard. Access to businesses in the project construction area would be maintained during business hours.

Because the project could potentially result in short-term safety conflicts among construction vehicles, automobile traffic, pedestrians, and bicyclists, construction-related impacts are considered potentially significant. As such, Mitigation Measure TRAN-1 would be implemented, which requires the implementation of a traffic control plan throughout construction at the Olive Avenue Site. The plan shall be approved by the City and shall include measure for re-routing vehicles, bicycles, and pedestrians during any phases of construction when access would be blocked or restricted. With implementation of Mitigation Masure TRAN-1, construction activities at the Olive Avenue Site would not result in inadequate emergency access. The impact would be less than significant.

Once construction is complete, the project would result in the widening of Olive Avenue to include a center turn lane and right-turn lane, improving maneuverability for emergency responder vehicles including the ability to more easily pass other drivers who have slowed, stopped, or pulled to the right. This would result in a beneficial operational impact of the project.

Project work at the Habitat Enhancement Site would have no impact on emergency access. No impact would occur.

MITIGATION MEASURES

Mitigation Measure TRAN-1. Traffic Control Plan

The City of Novato shall require the construction contractor to prepare and implement a traffic control plan for the proposed construction activities. The plan shall be approved by the City and include measures for re-routing vehicles, bicycles, and pedestrians during any phases of construction when access would be blocked or restricted. The traffic control plan may include one or more of the following measures, as applicable to the project, and be consistent with the *California Manual on Uniform Traffic Control Devices* (CA-MUTCD):

- Flaggers and/or signage shall be used to guide drivers through and/or around the construction zone.
- Signs shall be provided to advise bicyclists and pedestrians of temporary detours around construction zones.
- Truck routes shall be identified in the traffic control plan, minimizing to the extent feasible truck traffic on local roadways and residential streets.
- Lane closures shall be limited during peak hours to the extent feasible, and the street restored to normal operations when possible.
- Access to parcels along the corridor shall be maintained as feasible.
- During any occasion when access to a property is blocked, the contractor shall be required to have means readily available to accommodate emergency vehicle access, such as plating over excavations, short detours, and/or alternate routes.
- Emergency responders including police, fire, and ambulance providers, as well as transit providers and schools, shall be notified by the City in advance of the timing, location,

and duration of construction activities and the locations and durations of any temporary lane closures.

3.2.18 Tribal Cultural Resources

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i)	*Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*	☐	☒	☐	☐
ii)	*A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*	☐	☒	☐	☐

ENVIRONMENTAL SETTING

Because Native American archaeological sites are sometimes buried by accumulated sediments, they cannot be identified by conventional archaeological surface surveys. Within the southern North Coast Ranges of California, buried archaeological sites have been identified in at least 40 locations, with at least 14 of these found in Marin County. In most cases, the sites are associated with buried soils (paleosols) that were formed at the surface of a landform while it was relatively stable. Consequently, a significant portion of the archaeological record has been buried by younger deposits in northern and central California.

While it is hard to predict exactly where buried sites may be located, Native American archaeological sites are not distributed randomly throughout the landscape but tend to occur in specific geo-environmental settings. For example, it is known that most sites tend to be located on relatively level landforms located near present or former water sources that made them attractive places for human use and occupation. Most Native American sites in the region are located near stream channels, especially near perennial stream confluences, and near former lakes, springs, or wetlands where diverse plant and animal populations were often concentrated.

A description of the environmental setting related to tribal cultural resources can be found in *Section 3.2.5, Cultural Resources*.

Tribal Cultural Resources Assembly Bill 52 (AB 52)

AB 52 (Chapter 532, Statutes 2014) required an update of the CEQA Guidelines to include questions related to impacts to tribal cultural resources. AB 52 establishes a consultation process with all California Native American Tribes on the Native American Heritage Commission List, Federal and Non-Federal Recognized Tribes. AB 52 also establishes a new class of resources: Tribal Cultural Resources. Key components of AB 52 include consideration of Tribal Cultural Values in determination of project impacts and mitigation and required Tribal notice and meaningful consultation.

PRC Section 21080.3.2(b) states that consultation ends when either 1) parties agree to mitigation measures or avoid a significant effect on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort concludes that mutual agreement cannot be reached.

State of California Public Resources Code

Section 21074 of the PRC defines historical resources related to tribal cultural resources.

a) "Tribal cultural resources" are either of the following:
    a. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
        A. Included or determined to be eligible for inclusion in the California Register of Historical Resources.
        B. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
    b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Section 5020.1(k) defines "Local register of historical resources" as a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution.

Section 5024.1 is the establishment of the California Register of Historical Resources (California Register).

TRIBAL COMMUNICATIONS

Native American Consultation

Far Western contacted the NAHC on February 18, 2021, and requested a search of the Sacred Lands File for the Olive Avenue APE. The Sacred Lands File indicated positive results. A list of

two Native American groups was provided for further information: The Graton Rancheria and the Guidiville Indian Rancheria. Consultation letters were sent to both groups by mail and email in March 2021.

Contact was made with individuals from both Graton Rancheria and Guidiville Rancheria. The representative from Guidiville, Marlene Sanchez, expressed no concerns and had no additional comments or questions. In 2021, the Tribal Heritage Preservation Officer (THPO) from Graton Rancheria, Buffy McQuillen, confirmed that the letter had been received and processed, but had not yet been reviewed at the time of the phone call. Following the addition of the Pacheco Creek APE, Far Western followed up with Graton Rancheria to discuss the new habitat enhancement area and reinitiate outreach. A consultation meeting was held on March 28, 2022, with representatives from Far Western, Graton Rancheria, the City of Novato, and WRA.

Far Western contacted the NAHC on October 24, 2024, and requested an updated search of the Sacred Lands File for the APE. Far Western received a response from the NAHC on October 25, 2024, confirming that their search of the Sacred Lands File was positive. The same list of Native American contacts was provided: Graton Rancheria and the Guidiville Indian Rancheria. Consultation letters were sent to both groups by the City of Novato via email on November 19, 2024, to inform them of resumed environmental compliance work for the project. On November 27, 2024, Graton Rancheria responded by email that they received the updated project letter and requested a consultation meeting with the City of Novato.

Subsequent to the consultation request, Petr Skala, City of Novato Associate Engineer, contacted Graton Rancheria to commence the consultation process. City staff and Graton Rancheria representatives participated in a consultation teleconference meeting on January 14, 2025. The project was discussed, and it was determined that the City should provide Graton Rancheria with additional project information and that a site visit should be scheduled. An in-field meeting with Graton Rancheria occurred on February 19, 2025. The consultation meeting was held at the Olive Avenue APE and Pacheco Creek APE locations and was attended by the City of Novato, Far Western, WRA Inc., and Graton Rancheria representatives. Recommendations made by Graton Rancheria representative Kyle Rabellino have been incorporated into project mitigation measures CUL-1/TCR-1 and CUL-2/TCR-2, as outlined below.

DISCUSSION OF IMPACTS

a) ***Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:***

i) ***Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?***

ii) ***ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the***

lead agency shall consider the significance of the resource to a California Native American tribe.

Less-than-significant Impact with Mitigation Incorporated

For the Olive Avenue area, the closest source of perennial water is Novato Creek, which currently lies more than 2,600 feet (800 meters) southwest of the area. This segment of Olive Avenue is also located about 600 feet (~180 meters) southwest of the Rush Creek marsh that was historically part of San Francisco Bay. Conversely, the Pacheco Creek area lies along a small, intermittent drainage that appears to be man-made, and about 1,300 feet (~400 meters) west of the historical tidal margin of San Francisco Bay.

A geographic information system (GIS) model was used to evaluate environmental factors that are associated with most precontact site locations. These factors include distance to water, slope, and distance to a channel confluence, absolute elevation above sea level, and the age of surface soils and landforms. The results of the modeling exercise are discussed below.

Olive Avenue

The geoarchaeological assessment and previously identified precontact artifacts nearby indicates a Moderate potential for buried sites within the Olive Avenue area; however, due to the limited and narrow footprint of proposed ground disturbances associated with railroad and drainage ditch improvements, archaeological and tribal monitoring is recommended to ensure the identification of subsurface cultural deposits that may be encountered within the Olive Avenue site. Consultation in February 2025 with Graton Rancheria supported this approach at the Olive Avenue work location. This monitoring requirement is contained in Mitigation Measure CUL-1/TCR-1. Impacts resulting from the potential discovery of unknown human remains or funerary items during project construction would be avoided through implementation of Mitigation Measure CUL-2/TCR-2.

Pacheco Creek Habitat Enhancement Site

The modeling indicates a high potential within the Pacheco Creek site. The elevated potential of the Pacheco area is due to its proximity, and position between Pacheco Creek to the north and the historical marshlands to the east. This assessment is consistent with the presence of six previously recorded shellmound sites located 1,000 feet or less from the site. Given this, there is a reasonable chance that a previously unknown archaeological deposit(s) may be present within the Pacheco Creek area that could be affected by project ground disturbance. Further, given the potential for Native American shellmounds in the vicinity, cultural material in secondary context could be present at a relatively shallow depth. While subsurface impacts from the proposed riparian enhancement efforts at the Pacheco Creek site are shallow (approximately 2 feet or less), the presence or absence of cultural materials should be confirmed through testing consisting of shallow hand excavation. Tribal consultation with Graton Rancheria in February 2025 confirmed this approach, which has been folded into Mitigation Measure CUL-1/TCR-1.

During consultation with Graton Rancheria, it was determined that archaeological and tribal monitoring will be required at Olive Avenue during ground disturbances associated with the railroad corridor and drainage ditch improvements. Due to the narrow footprint for proposed excavation-related work at Olive Avenue, testing in advance of construction efforts is not recommended. Alternatively, due to cultural resource sensitivity at Pacheco Creek, a focused program of subsurface testing within the planting footprint for the riparian enhancement

activities will be required in advance of the project. Graton Rancheria requested the preparation of a Cultural Resources Monitoring and Testing Plan prior to any project-related efforts. The plan will be prepared by the archaeological consultant and reviewed and approved by Graton Rancheria. A Graton Rancheria tribal monitor will participate in both monitoring and testing. These recommendations are addressed in Mitigation Measure CUL-1/TCR-1. Impacts resulting from the potential discovery of unknown human remains or funerary items during project ground disturbance would be avoided through implementation of Mitigation Measure CUL-2/TCR-2.

With implementation of Mitigation Measures CUL-1/TCR-1 and CUL-2/TCR-2, project impacts with respect to tribal cultural resources would be reduced to a less-than-significant level.

MITIGATION MEASURES

Mitigation Measure CUL-1/TCR-1. Cultural and Tribal Resources Monitoring and Testing Plan

A Cultural/Tribal Resources Monitoring and Testing Plan shall be prepared prior to the start of ground-disturbing activities at either of the project sites (Pacheco Creek or Olive Avenue). The Plan shall include protocols to be implemented in the event that an unanticipated archaeological resource and/or resource that may be considered a tribal cultural resource is identified during land disturbances or construction. The Plan shall be prepared under the direction of an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology. The Plan shall be reviewed by the City and Graton Rancheria and shall include shallow hand excavation testing at the Pacheco Creek site and archaeological and tribal monitoring at Olive Avenue. Additionally, the Plan shall outline the appropriate treatment of the resource in coordination with Graton Rancheria. Examples of appropriate treatment for tribal cultural resources may include, but are not limited to, protecting the cultural character and integrity of the resource, protecting traditional use of the resources, protecting the confidentiality of the resource, or heritage recovery. Based on the project schedule, monitoring and testing may occur during separate project phases and the appropriate protocols for each phase shall be detailed in the plan. A cultural resources awareness and sensitivity training shall be provided for all project personnel prior to the start of any construction and habitat enhancement activities and will be further described in the plan. Department of Parks and Recreation forms (DPR 523) will be prepared for all new discoveries during testing and monitoring and submitted to the Northwest Information Center and Graton Rancheria.

Mitigation Measure CUL-2/TCR-2. Accidental Discovery of Human Remains and Funerary Items

If human remains are encountered, excavation or disturbance of the location shall be halted in the vicinity of the find, and the City, Graton Rancheria, and the Marin County coroner shall be contacted. The procedures for the treatment of discovered human remains are outlined in California Health and Safety Code §§ 7050.5 and 7052 and PRC § 5097. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code § 7050.5[b]). If the coroner determines the remains are Native American, the coroner must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code § 7050[c]). The City shall contact the Most Likely Descendent (MLD), as determined by the NAHC, regarding the remains. The MLD, in cooperation with the City, shall determine the ultimate disposition of the remains and any associated funerary items.

3.2.19 Utilities and Service Systems

Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☒	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Water within the City is provided by the North Marin Water District. The North Marin Water District's water supply comes from two sources: a groundwater aquifer adjacent to the Russian River, and Stafford Lake. The North Marin Water District purchases approximately 80 percent of its water supply from the Sonoma County Water Agency CWA. The Sonoma County Water Agency's water is collected 60 to 100 feet below the gravel beds adjacent to the Russian River and is conveyed to the District's Novato Water System via a 7.1-mile-long aqueduct known as the North Marin Aqueduct. Approximately 20 percent of the North Marin Water District's water supply comes from Stafford Lake, which is situated about one half mile outside of the City limits to the northeast.

Wastewater conveyance and treatment is provided by the Novato Sanitary District through underground pipes and at the Wastewater Treatment Plant located at 500 Davidson Street.

Electrical service in the City is provided by PG&E. Trash and recycling service is provided by Recology.

DISCUSSION OF IMPACTS

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less-than-Significant Impact with Mitigation Incorporated

As described in *Section 2.3, Project Components,* the project would reconfigure the existing stormwater drainage features within the Olive Avenue Site. Olive Ditch would be reconfigured by enclosing the ditch into a reinforced concrete box culvert, and the existing storm drain cross-culvert under Olive Avenue would be replaced by a reinforced concrete box culvert. The purpose of these improvements is to help convey storm flows during 25-year and 100-year storm events to help alleviate localized flooding. In addition, the project would include the undergrounding of existing PG&E electrical power infrastructure, Comcast cable, and Verizon phone lines along Olive Avenue between Redwood Boulevard and the SMART railroad tracks, which would be installed via open cut trenching. The purpose of utility undergrounding is to reduce fire hazards, accidents, safety risks, and power outages due to downed lines.

As these improvements are included in the project, potential impacts of such improvements are discussed throughout this IS/MND. With the inclusion of all mitigation measures described in this IS/MND, such improvements would not result in a potentially significant environmental effect. The impact would be less than significant with mitigation incorporated.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less-than-Significant Impact

Construction activities associated with the project would require some water use, which would be obtained from an existing source and trucked to the sites. Water in the City is supplied by the North Marin Water District. The District's 2020 Urban Water Management Plan (UWMP) provides an analysis of the District's projected and historical water demands, water supplies, supply reliability and potential vulnerabilities, water shortage contingency planning, and demand management programs. The UWMP estimates, taking into account historical water use, expected population increase and other growth, climatic variability, and other assumptions, that potable and raw water demand within the District's service area is projected to increase to 10.50 acre-feet per year by 2045, which represents an increase of 23 percent compared to the 2016-2020 average. As described above, water supply for the District primarily comes from purchased water from the SCWA's Russian River Project (North Marin Water District 2021). The District is responsible for making sure that adequate water supplies are available under existing and future conditions. The project would not generate a substantial unplanned usage of water which would not have been accounted for in regional water supply planning. The minimal volume of water that would be required during the short duration of construction would have a less-than-significant impact on available water supplies. Therefore, sufficient water supplies would be

available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. The impact would be less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact

As described in *Section 4.2.14, Population and Housing*, the proposed project would not generate any population growth and therefore would not generate new demand for wastewater treatment. No impact would occur.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less-than-Significant Impact

The project would generate construction and demolition waste during construction, which would need to be disposed of at a facility that accepts such types of waste. The project would comply with all applicable construction and demolition waste recycling requirements, as described below in *Impact e)*. Project operation would not cause any increase in solid waste generation. The impact would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less-than-Significant Impact

Solid, non-hazardous wastes generated by the project would be taken to the Redwood Landfill or Recycling Center located north of the Novato city limit. The landfill is permitted to accept 2,140 tons of material per day and has a design capacity of 26,077,000 cubic yards. The estimated closure date of the landfill is 2036. The project would not generate a substantial unplanned amount of waste that would overwhelm the Redwood Landfill. As such, the Redwood Landfill facility would have sufficient capacity to accept solid waste generated from project construction. Excavated soils would be used for backfill or hauled off-site for recycling or disposal as required by City and County regulations.

Any hazardous wastes that may be generated from construction activities would be hauled to a licensed disposal site. The project would be required to comply with all applicable federal, state, and local regulations related to the disposal of hazardous and solid wastes. The project would not conflict with any applicable management and reduction statutes related to solid waste. The impact would be less than significant.

Following construction, the project would not require solid waste disposal and is not expected to have any effect on solid waste generation. No operation-related impact would occur.

3.2.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The project sites are located in the Local Responsibility Area for wildfire management within the City of Novato (CAL FIRE 2024). The project sites are not within any Fire Hazard Severity Zone (FHSZ) as designated by CAL FIRE. The nearest very high FHSZ is located approximately 2.6 miles south of the Olive Avenue Site and approximately 2,750 feet west of the Habitat Enhancement Site (CAL FIRE 2024).

DISCUSSION OF IMPACTS

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact

As analyzed in *Section 3.2.17, Transportation,* construction activities at the Olive Avenue Site would require temporary partial lane closures along the roadway. The Olive Avenue Site would be maintained to allow traffic flow in both directions during construction. In addition, Mitigation Measure TRAN-1 would be implemented which would require a traffic control plan to be prepared and implemented throughout construction to ensure that adequate access for emergency vehicles is maintained throughout the Olive Avenue Site during construction. Furthermore, the Emergency Operations Plan does not designate specific evacuation routes within the City. Therefore, the project would not substantially impair an adopted Emergency Response Plan or Emergency Evacuation Plan. The impact would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less-than-Significant Impact

The proposed improvements at the project sites would not result in any exacerbated fire risks. The project sites are not within any locally designated wildfire hazard zone and are not within a FHSZ as designated by CAL FIRE. As part of the Olive Avenue Site work, the existing overhead utility lines would be undergrounded which would result in a reduced risk of fire hazards. In addition, the enhanced roadway safety that would result from project operation would reduce fire risks because it would reduce the likelihood of traffic accidents along the corridor. Project work at the Habitat Enhancement Site would include removal of overgrown vegetation, which would also reduce risks of wildfire spread. As such, the project would not exacerbate any fire risks and would have a long-term beneficial impact related to wildfire safety. No impact would occur.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact

The project would not include any associated infrastructure which would exacerbate fire risk. The project would involve the widening of Olive Avenue, undergrounding of existing overhead utilities and improving drainage at the Olive Avenue Site, and enhancing riparian habitat at the Habitat Enhancement Site. All utilities added for the project would be installed in accordance with standard practices to prevent the risk or spread of fire and would not exacerbate fire risk or result in temporary or ongoing impacts to the environment. As mentioned above, the project would reduce risks of wildfire within the project sites. Therefore, the project would not require the installation or maintenance of associated infrastructure which might exacerbate fire risk or result in temporary or ongoing impacts to the environment. No impact would occur.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less-than-Significant Impact

The project would not expose people or structures to significant risks as a result of runoff, slope instability, or drainage changes. The project sites are located in relatively flat areas that are not at risk of landslides. Work at the Olive Avenue Site would involve the widening of Olive Avenue, undergrounding overhead utilities, reconfiguring existing stormwater drainage infrastructure, and adding bicycle and pedestrian improvements. One of the purposes of the project is to accommodate existing and anticipated runoff levels to alleviate localized flooding around Olive Avenue. While the project would result in drainage changes, these changes would not expose people or structures to any risks. Therefore, work at the Olive Avenue Site would not expose people or structures to significant risks associated with flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. The impact would be less than significant.

Project work at the Habitat Enhancement Site would include the removal of vegetation, which may result in drainage changes. This work would occur around Pacheco Creek and would not

occur near developed areas that might be impacted by drainage changes. Therefore, work at the Habitat Enhancement Site would not expose people to risks associated with flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. The impact would be less than significant.

3.2.21 Mandatory Findings of Significance

		Potentially Significant Impact	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

DISCUSSION OF IMPACTS

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less-than-Significant Impact with Mitigation Incorporated

The proposed project would have the potential to impact special-status birds, common native nesting birds, and roosting bats. As described in Section 3.2.4, Biological Resources, the project would implement Mitigation Measures BIO-01, BIO-2a, BIO-02b, and BIO-03 to reduce impacts to these species to a less-than-significant level. The project would not result in any permanent impacts to habitat for special-status species or threaten to eliminate a plant or animal community. The impact would be less than significant with mitigation incorporated.

As discussed in Section 3.2.5, Cultural Resources, there are no cultural resources within the project sites that are eligible for inclusion on the National Register or California Register. Mitigation Measure CUL-1 would be implemented which requires for the proper analysis and treatment of any archaeological resources that may be discovered by project construction work. With implementation of this measure, the project would not eliminate any important examples

of major periods of California history or prehistory. The impact would be less than significant with mitigation incorporated.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less-than-Significant Impact

Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. Other projects within the vicinity of the proposed project sites include:

- The Village at Novato, adjacent north of the Olive Avenue Site
- Marin County Large Trash Capture Device Installation, adjacent north of the Olive Avenue Site
- Grant Avenue mixed-use development projects, 0.25-0.50 mile southwest of the Olive Avenue Site
- Homeward Bound of Marin, 0.15 mile west of the Habitat Enhancement Site (residential units built, events space and kitchen has not yet been built)

Construction of the project is not anticipated to result in any impacts that could combine with impacts associated with these other projects within the vicinity of the project sites to produce an augmented cumulative effect. None of these other projects are expected to undergo construction at the same time as the work proposed at the Olive Avenue Site. The work proposed at the Habitat Enhancement Site would consist of vegetation planting and management and is not expected to impact neighboring properties. Impacts would be less than significant.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less-than-Significant Impact with Mitigation Incorporated

Potential impacts to human beings have been addressed in this IS/MND, including impacts related to air quality, noise, and transportation. Project construction activities would cause potential temporary impacts to humans due to the generation of criteria air pollutants, which would be considered less than significant under CEQA with implementation of Mitigation Measure AIR-1. Mitigation Measure AIR-1 that the project implement BMPs as recommended by the BAAQMD 2022 CEQA Air Quality Guidelines. As discussed in *Section 3.2.13, Noise,* project noise impacts were found to be less than significant; therefore, no cumulative noise impact would occur. As discussed in *Section 3.2.17, Transportation*, Mitigation Measure TRAN-01 would be implemented which requires the preparation of a traffic control plan to ensure that adequate access is maintained at the olive Avenue Site throughout construction activities. With implementation of this measure, the project would not result in a cumulative transportation impact. The impact would be less than significant with mitigation incorporated.

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APPENDIX A. BIOLOGICAL RESOURCES TECHNICAL REPORT

Biological Technical Resources Report

Olive Avenue Widening Project

Novato, Marin County, California

Prepared for:

Petr Skala
City of Novato
922 Machin Avenue
Novato, CA 94945
415.899.8237
pskala@novato.org

December 2024

Prepared by:

Rei Scampavia
WRA, Inc.
2169 G East Francisco Blvd
San Rafael, CA 94901

WRA#27346

In Association with:

Underwood & Rosenblum Inc.
1630 Oakland Road, Suite A114

San Jose, CA 95131

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List of Preparers

Leslie Allen	Principal
Rei Scampavia	Project Manager, Associate Plant Biologist
Kelsey Scheckel	Wildlife Biologist
Kurt Hildebrandt	Plant Biologist
Neal Jander	GIS Analyst

List of Acronyms

BGEPA	Bald and Golden Eagle Protection Act
BMPs	Best Management Practices
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFP	California Fully Protected Species
CFR	Code of Federal Regulations
City	City of Novato
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	U.S. Army Corps of Engineers
CPRC	California Public Resources Code
CPUC	California Public Utilities Commission
CSRL	California Soils Resource Lab
CWA	Clean Water Act
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Federal Endangered Species Act
Inventory	California Native Plant Society Rare Plant Inventory
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation & Management Act
MBTA	Migratory Bird Treaty Act
NCCP	Natural Community Conservation Plan
NETR	National Environmental Title Research
NMFS	National Marine Fisheries Service
NPPA	California Native Plant Protection Act
NWI	National Wetland Inventory
OHWM	Ordinary High Water Mark
Rank	California Rare Plant Ranks
RHA	Rivers and Harbors Act
RMP	Restoration Management Permit
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SC	State Candidate
SFEI	San Francisco Estuary Institute
SMART	Sonoma-Marin Area Rail Transit
SSC	Species of Special Concern
SWRCB	State Water Resource Control Board
TOB	Top of Bank
USC	U.S. Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group
WRA	WRA, Inc.

1.0 INTRODUCTION

WRA, Inc. (WRA) has prepared this Biological Resources Technical Report to evaluate existing biological resources, potential impacts, and mitigation measures (if required) for the Olive Avenue Widening Project (Project) located in the City of Novato (City), Marin County, California (Project Area, Appendix A – Figure 1). The City is planning to widen Olive Avenue between the Sonoma-Marin Area Rail Transit (SMART) railroad and Redwood Boulevard, which will require culverting Olive Ditch, an intermittent stream/ditch that runs parallel to the north side of Olive Avenue. The Project also includes improvements to the current stormwater drainage system in the vicinity of Olive Avenue and Railroad Avenue, intended to alleviate flooding during anticipated 25- and 100-year storm events.

1.1 Overview and Purpose

This Biological Resources Technical Report provides an assessment of biological resources within the Project Area and immediate vicinity. The purpose of the assessment was to develop and gather information on sensitive land cover types and special-status plant and wildlife species to support an evaluation of the Project under the California Environmental Quality Act (CEQA). This report describes the results of the site visit, which assessed the Project Area for (1) the presence of sensitive land cover types, special-status plant species, and special-status wildlife species, (2) the potential for the site to support special-status plant and wildlife species. Based on the results of the site assessment, potential impacts to sensitive land cover types and special-status species resulting from the proposed Project were evaluated. If the Project has the potential to result in significant impacts to these biological resources, measures to avoid, minimize, or mitigate for those significant impacts are described.

A biological resources assessment provides general information on the presence, or potential presence, of sensitive species and habitats. Additional focused studies (such as protocol level species surveys) may be required to support regulatory permit applications or to implement mitigation measures included in this report. This assessment is based on information available at the time of the study and on-site conditions that were observed on the dates the site was visited. Conclusions are based on currently available information used in combination with the professional judgement of the biologists completing this study.

1.2 Project Description

1.2.1 Project Objectives

Project objectives identified by the City include the following:

- Improve and widen Olive Avenue to:
    a. Accommodate a center turn lane to relieve traffic along the north side of the roadway;
    b. Add a sidewalk along the north side of the street to improve public safety;
    c. Add a bike lane along the eastbound travel lane;
    d. Rehabilitate the existing pavement along Olive Avenue;
    e. Improve sight distance approaching the railroad crossing; and
    f. Place existing overhead utilities underground along Olive Avenue between Redwood Boulevard and Railroad Avenue.

- Replace approximately 660 feet of stormwater drainage facilities along Olive Avenue (i.e., Olive Ditch) to convey storm flows during 25-year storm events to help alleviate localized flooding and not exacerbate flooding along the southern side of the street.
- Replace the existing 12-inch storm drain cross-culvert under Olive Avenue with a 4-foot by 2-foot reinforced concrete box culvert to convey 100-year storm flows without impacting existing flood elevations.

1.2.2 Project Components

The Project consists of the following components:

- Design and construction of the Olive Avenue roadway widening, Olive Ditch pipeline installation, Olive Avenue culvert installation
- Construction of the Olive Avenue utility undergrounding
- Habitat enhancement at Pacheco Creek

OLIVE AVENUE WIDENING AND OLIVE DITCH CULVERT INSTALLATION

Olive Avenue would be widened from approximately 40.5 feet to approximately 80 feet, and improved to accommodate a new approximately 10.5-foot-wide sidewalk on the north side and keeping the existing 10 feet wide on the south side, add new curb and gutter to the north side, and 11-foot travel lanes on both sides of the street, with a center 11-foot two-way left turn lane (typical widths)**Error! Reference source not found.**. The crown elevation of the existing roadway would be no higher than under existing conditions. No parking spaces would exist on the north side of the finished street while parking on the south side would remain as under existing conditions. One new driveway would be constructed along the north side of the street into the undeveloped commercial property east of Trader Joe's to allow for right-in and right-out movements. This undeveloped commercial property may be developed in the future, but no development of said parcel is included in this Project. The existing median curb in Olive Avenue west of the railroad crossing would be replaced in kind and in the same location and complemented with a striped median. A raised traffic control island would be installed at the new driveway to direct turn movements.

The Olive Avenue sidewalk, curb, and gutter would be extended east across the railroad corridor through the intersection of Olive Avenue and Railroad Avenue, to provide a connection between the existing sidewalk to the east and the Project improvements. The railroad crossing surface would remain unchanged and consist of concrete panels. Two custom headwalls would be constructed along the north side of Olive Avenue, one on each side of the railroad crossing above the two existing drainage ditches.

A junction box would be constructed within approximately 105 square feet of an unnamed drainage ditch to receive flow from the two existing culverts; flow would continue to be directed north in the ditch. Once the roadway widening work is complete, the road would be repaved. The crossing would be installed in conformance with California Public Utilities Commission (CPUC) General Order 88-B, 72-B, and 75-D for at-grade railroad crossings.

Olive Ditch would be enclosed into an approximately 650-foot-long, 5-foot by 3-foot reinforced concrete box culvert extending from Redwood Boulevard before expanding to a double 6-foot by 3-foot reinforced concrete box culvert 140 feet west of the railroad. In addition to the upstream runoff from west of Redwood Boulevard, Project Area runoff will enter the double 6-foot by 3-foot

culverts via seven grate openings of approximately 3 feet by 4 feet in area, each embedded in the top of the culverts. The southern edge of Olive Avenue contains an additional three grate inlet openings that will empty into a new 4-foot by 2-foot reinforced concrete box culvert 168 feet to the west of the railroad centerline. This 4-foot by 2-foot culvert crosses perpendicular to Olive Avenue and would drain into the Project's double 6-foot by 3-foot culverts. The existing 36-inch diameter reinforced concrete pipe passing under Olive Avenue just west of the railroad crossing will be retained and extended to pass under the widened roadway.

On the west end, the culvert would connect to the existing pipeline under Redwood Boulevard. On the east end, the culverts would terminate at the railroad corridor into a concrete armored ditch west of the railroad prism and north of Olive Avenue. The existing 38-inch by 60-inch culvert under the Trader Joe's driveway would be replaced as part of the installation of the culvert. New drainage inlets located along Olive Avenue would be connected to the new culverts. The new culverts would be designed to convey flow from a 25-year storm event, including any new flow that may result from the widening of Olive Avenue.

Improvements to Olive Avenue, the Olive Ditch pipeline installation, and Olive Avenue culvert installation would result in approximately 0.67 acre of new impervious surface (0.97 acre for new and resurfaced existing impervious surfaces combined). This Project component would mostly occur within the City's ROW but would require an encroachment permit from SMART for the railroad crossing.

OLIVE AVENUE UTILITY UNDERGROUNDING

This Project component consists of undergrounding existing PG&E electrical power, Comcast cable, and Verizon phone lines along Olive Avenue between Redwood Boulevard and the SMART railroad into an approximately 633-foot-long joint utility trench on the north side of Olive Avenue under the proposed sidewalk.

Most of the utility undergrounding would be installed via open trench construction methods. Typically, the joint trench would be approximately 36 inches wide and 4 to 5 feet deep and would contain multiple conduits, including for Comcast, PG&E, and Verizon. The trench would be backfilled with native material to a compaction of 90 percent. Because the trench will not go under the SMART railroad, a new utility pole will be installed to enable the future option of extending the utilities overhead across the SMART railroad corridor as part of another project to connect them to an existing PG&E vault in Railroad Avenue.

Construction would also include installation of several subsurface junction boxes, vaults, and associated appurtenances for the various utilities. These subsurface enclosures would range from approximately 4 to 7 feet deep. All work would occur within the City's right-of-way (ROW). The utility undergrounding project component would result in a marginal increase in impervious surface and would resurface approximately 210 square feet of existing impervious surfaces.

1.2.3 Project Construction

Construction of the Project components along Olive Avenue would take approximately eight months to complete: four months for joint trench utilities work and five months for culvert installation and roadway widening. One of the months would involve work on both aspects of the Project simultaneously. Construction activities within the banks of the drainage ditch would be

performed between the months of June 15 and October 15, when flow would be lowest. Typical daily construction hours would be in conformance with Novato Municipal Code, Section 19.22.070; and may occur between 7:00 a.m. and 6:00 p.m. on weekdays, and between 10:00 a.m. and 5:00 p.m. on Saturdays.

Most of the construction activities would be located within the City ROW; however, some work would be required within the SMART ROW (e.g., roadway widening). Because the rail corridor may be active for passenger and freight train service during the construction period, construction work windows and agreements would require coordination with SMART to minimize conflicts. The City would obtain an encroachment permit from SMART for work within their ROW.

CONSTRUCTION ZONE, ACCESS, AND STAGING AREAS

The construction disturbance area would be approximately 0.97 acre. During construction, worker vehicles and haul trucks would access the Project Area from U.S. Highway 101 and local City streets, including Olive Avenue and Redwood Boulevard. Staging of construction equipment and materials is anticipated to occur within the Project Area.

PEDESTRIAN ACCESS AND TRAFFIC DETOURS

Partial lane closures would be required along Olive Avenue between Redwood Boulevard and Railroad Avenue during construction. During construction, parking along Olive Avenue in the Project area would be unavailable. The existing sidewalk on the southern side of Olive Avenue would remain open to pedestrian access during most of the construction. Local businesses on the south side of Olive Avenue would utilize access points along Mulligan Lane when possible. Trader Joe's and other shopping center traffic would remain accessible via the driveway at Redwood Boulevard. Access to businesses in the Project construction area would always be maintained during business hours.

DEWATERING

Construction activities within the drainage ditch would be performed between June 15 and October 15, which would correspond to times when there is little or no precipitation and when flow would be lowest (or absent). If flowing water is present in the ditch, the flow would be diverted by placing coffer dams upstream and downstream of the active construction areas using sandbags and directing flow through a pipe to discharge downstream of the Project area. The face of the sandbag coffer dams would be lined with 10-mil poly sheeting to prevent seepage.

Because the ditch is relatively flat, bypass flows would be piped around the construction areas by pumping using a 50 horsepower, noise-attenuated diesel-powered pump or an electric sump pump with a diesel generator staged away from the ditch.

The length of the bypass pipe would be the minimum necessary to safely convey the flow through the construction site and would be placed in the bed of the ditch at natural grade. Diverted flows would be returned to the ditch immediately downstream of the work area. Once any upstream flow is diverted, any standing water within the construction area would be pumped out of the ditch and discharged nearby (e.g., undeveloped commercial parcel, Railroad Ditch north of Olive Avenue) to the ground to allow for infiltration into the ground, or the local storm drain system. After construction, the diversion pipe and coffer dam material would be removed from the channel

and areas of the channel not scheduled for pipeline installation would be restored to pre-construction condition.

Groundwater dewatering may also be required to provide a dry work area if groundwater is encountered during excavation activities, as groundwater depths in the Project area are estimated at three to seven feet below ground surface, which corresponds with the depths of trenching and excavation for the Project.

Temporary groundwater dewatering would involve the pumping of groundwater in a localized area to lower the water level to just below the bottom of the excavation. Any groundwater encountered would be held in a Baker tank or a similar water storage system and allowed to infiltrate into the ground or discharged in the local storm drain system.

All discharges would be performed in conformance with San Francisco Bay Regional Water Quality Control Board (RWQCB) and applicable local discharge requirements.

TREE PROTECTION, REVEGETATION, AND SITE RESTORATION

Tree removal is not anticipated for this Project; there are no trees along Olive Ditch, and the one street tree along the south side of Olive Avenue would remain and be protected during construction. During construction of the Olive Avenue widening, root protective fabric would be installed prior to installation of new concrete, to protect existing street and landscaping trees.

Clearing and grubbing would be required prior to utility undergrounding, pipeline and culvert installation and roadway widening. Following completion of construction, any areas within the construction zone altered by construction activities would be restored to at or near pre-construction conditions. Pavement over disturbed areas would be replaced, and soil would be revegetated with hydroseeding.

JOINT UTILITY TRENCH CONSTRUCTION

Most of the joint utility trench would be constructed using open trench construction. The open trench construction method involves clearing the ground of vegetation within the work area; grading or pavement cutting; excavation and potential shoring of the trench; installation of the pipe bedding, pipeline, valves, and appurtenances; backfilling of the trench; and restoration of the ground surface.

Installation of underground utilities would require an 11-foot-wide (at base) trench to accommodate the proposed 5-by-3-foot box culvert and a 19-foot-wide trench to accommodate the proposed double 6-by-3-foot box culvert. Dewatering of the trench would be required in areas where groundwater is encountered (as described above in the Dewatering Section above). Once the trench is excavated, shored (if necessary), and dewatered (if necessary), bedding material would be placed in the bottom of the trench, and the conduit sections would be installed or cast-in-place. Native material would be reused to backfill the trench where feasible. Engineered aggregate base material would also be used for backfilling. Following compaction, the work surface area would be restored to its preconstruction or close to pre-construction condition.

PIPELINE AND CULVERT INSTALLATION

To install the Olive Ditch culverts, the drainage ditch would be cleared of vegetation and graded for level placement of the culverts. Prefabricated 5- or 6-foot concrete sections would be placed into the drainage ditch using a small crane. Once the culverts are installed or cast-in-place, the ditch would be backfilled with native soil or engineered material, graded to conform to the new roadway surface, and paved.

1.3 Summary of Results

The Project will result in permanent impacts to 600 linear feet (0.07 acre) of intermittent stream/ditch, including the entirety of Olive Ditch between Redwood Boulevard and Railroad Avenue, and a small section of an unnamed intermittent stream/ditch on the east side of the SMART railroad. No special-status plant species have potential to occur within the Project Area and/or be impacted by the Project. One special-status species has potential to occur in the immediate vicinity of or in portions of the Project Area: white-tailed kite (*Elanus leucurus*, California Fully Protected Species [CFP]). Mitigation measures and best management practices have been developed and provided herein to reduce potential impacts to these resources to a less than significant level.

Table 1. Summary of Biological Resources Evaluation

CEQA Assessment Category[1] IV – Biological Resources	Biological Resources Considered	Relevant Laws & Regulations	Responsible Regulatory Agency	Summary of Findings & Report Section[2]
Question A. **Special-status Species**	Special-status Plants Special-status Wildlife Designated Critical Habitat	Federal Endangered Species Act CA Endangered Species Act CA Native Plant Protection Act Migratory Bird Treaty Act Bald & Golden Eagle Protection Act	U.S. Fish & Wildlife Service National Marine Fisheries Service CA Department of Fish & Wildlife	Potentially significant impacts were identified and mitigation measures are included that reduce those impacts to a level that is less than significant. **See Section 5.2 for more information.**
Question B. **Sensitive natural communities & riparian habitat**	Sensitive Natural Communities Streams, Lakes & Riparian Habitat	CA Fish & Game Code Oak Woodland Conservation Act Porter-Cologne Act Clean Water Act	CA Department of Fish & Wildlife U.S. Army Corps of Engineers U.S. Environmental Protection Agency State Water Resources Control Board Regional Water Quality Control Board	Potentially significant impacts were identified and mitigation measures are included that reduce those impacts to a level that is less than significant. **See Section 5.1 for more information.**
Question C. **State and federally protected wetlands**	Wetlands Unvegetated surface waters	Clean Water Act: Sections 404/401 Rivers & Harbors Act: Section 10 Porter-Cologne Act	U.S. Army Corps of Engineers U.S. Environmental Protection Agency State Water Resources Control Board Regional Water Quality Control Board	Potentially significant impacts were identified and mitigation measures are included that reduce those impacts to a level that is less than significant. **See Section 5.1 for more information**

[1] *CEQA Questions have been summarized here, see Section 6.2 for details.*
[2] *As given in this report, see Section 5.0 subheadings.*

Table 1. Summary of Biological Resources Evaluation

CEQA Assessment Category[1] IV – Biological Resources	Biological Resources Considered	Relevant Laws & Regulations	Responsible Regulatory Agency	Summary of Findings & Report Section[2]
Question D. **Fish & Wildlife corridors**	Essential Fish Habitat Wildlife Corridors	CA Fish & Game Code Magnuson-Stevens Fishery Conservation & Management Act	CA Department of Fish and Wildlife National Marine Fisheries Service	Potentially significant impacts were not identified. **See Section 5.1 for more information**
Question E. **Local policies**	Protected Trees Coastal zone resources Other biological protections	Local Tree Ordinance General Plan (e.g. Stream & Wetland Setbacks) Local ordinances	Local and regional agencies CA Coastal Commission San Francisco Bay Conservation and Development Commission	Potentially significant impacts were not identified. **See Section 5.2 for more information**
Question F. **Local, state, federal conservation plans**	Habitat Conservation Plans Natural Community Conservation Plans	Federal Endangered Species Act Natural Community Conservation Planning Act	U.S. Fish and Wildlife Service CA Department of Fish and Wildlife	Potentially significant impacts were not identified. **See Section 5.2 for more information**

2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that were applied to the field investigations and analysis of potential Project impacts. Table 1 shows the correlation between these regulations and each Biological Resources question in the Environmental Checklist Form (Appendix G) of the CEQA guidelines.

2.1 Federal and State Regulatory Setting

2.1.1 Vegetation and Aquatic Communities

CEQA provides protections for particular vegetation types defined as sensitive by the California Department of Fish and Wildlife (CDFW) and aquatic features protected by laws and regulations administered by the U.S. Army Corps of Engineers (Corps), State Water Resources Control Board (SWRCB), and Regional Water Quality Control Boards (RWQCB). The laws and regulations that provide protection for these resources are summarized below.

Sensitive Natural Communities: Sensitive natural communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" (CDFW 2021a) and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2021b). Natural communities are ranked 1 through 5 in the CNDDB based on NatureServe's (2024) methodology, with those communities ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (California Code of Regulations [CCR] Title 14, Div. 6, Chap. 3, Appendix G). In addition, this general class includes oak woodlands that are protected by local ordinances under the Oak Woodlands Protection Act and Section 21083.4 of California Public Resources Code (CPRC).

Waters of the United States, Including Wetlands: The Corps regulates “Waters of the United States” under Section 404 of the Clean Water Act (CWA). Waters of the United States are defined in the Code of Federal Regulations (CFR) as including the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, such as tributaries, lakes and ponds, impoundments of waters of the U.S., and wetlands that are hydrologically connected with these navigable features (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Unvegetated waters including lakes, rivers, and streams may also be subject to Section 404 jurisdiction and are characterized by an ordinary high water mark (OHWM) identified based on field indicators such as the lack of vegetation, sorting of sediments, and other indicators of flowing or standing water. The placement of fill material into Waters of the United States generally requires a permit from the Corps under Section 404 of the CWA.

The Corps also regulates construction in navigable waterways of the U.S. through Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 U.S. Code [USC] 403). Section 10 of the RHA requires Corps approval and a permit for excavation or fill, or alteration or modification of the course,

location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor or refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States. Section 10 requirements apply only to navigable waters themselves, and are not applicable to tributaries, adjacent wetlands, and similar aquatic features not capable of supporting interstate commerce.

Waters of the State, Including Wetlands: The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The SWRCB and nine RWQCB protect waters within this broad regulatory scope through many different regulatory programs. Waters of the State in the context of a CEQA Biological Resources evaluation include wetlands and other surface waters protected by the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2019). The SWRCB and RWQCB issue permits for the discharge of fill material into surface waters through the State Water Quality Certification Program, which fulfills requirements of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Clean Water Act permit are also required to obtain a Water Quality Certification. If a project does not require a federal permit but does involve discharge of dredge or fill material into surface waters of the State, the SWRCB and RWQCB may issue a permit in the form of Waste Discharge Requirements.

Sections 1600-1616 of California Fish and Game Code: Streams and lakes, as habitat for fish and wildlife species, are regulated by CDFW under Sections 1600-1616 of California Fish and Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term "stream," which includes creeks and rivers, is defined in the CCR as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). The term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). Riparian vegetation has been defined as "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

2.1.2 Special-status Species

Endangered and Threatened Plants, Fish, and Wildlife. Specific species of plants, fish, and wildlife species may be designated as threatened or endangered by the Federal Endangered Species Act (ESA), or the California Endangered Species Act (CESA). Specific protections and permitting mechanisms for these species differ under each of these acts, and a species' designation under one law does not automatically provide protection under the other.

The ESA (16 USC 1531 et seq.) is implemented by the USFWS and the National Marine Fisheries Service (NMFS). The USFWS and NMFS maintain lists of endangered and threatened plant and animal species (referred to as "listed species"). "Proposed" or "candidate" species are those that are being considered for listing and are not protected until they are formally listed as threatened or endangered. Under the ESA, authorization must be obtained from the USFWS or NMFS prior to take of any listed species. "Take" under the ESA is defined as "harass, harm, pursue, hunt, shoot,

wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Take under the ESA includes direct injury or mortality to individuals, disruptions in normal behavioral patterns resulting from factors such as noise and visual disturbance and impacts to habitat for listed species. Actions that may result in take of an ESA-listed species may obtain a permit under ESA Section 10, or via the interagency consultation described in ESA Section 7. Federal-listed plant species are only protected when removal or destruction occurs on federal land; however, if a federal agency authorizes, funds, or carries out an action, that agency must insure through Section 7 consultation that the action is not likely to jeopardize the continued existence of the species.

The ESA also provides for designation of critical habitat, which are specific geographic areas containing physical or biological features "essential to the conservation of the species." Protections afforded to designated critical habitat apply only to actions that are funded, permitted, or carried out by federal agencies. Critical habitat designations do not affect activities by private landowners if there is no other federal agency involvement.

The CESA (CFGC 2050 et seq.) prohibits the take of any plant and animal species that the CFGC determines to be an endangered or threatened species in California. CESA regulations include take protection for threatened and endangered plants on private lands, as well as extending this protection to candidate species that are proposed for listing as threatened or endangered under CESA. The definition of a "take" under CESA ("hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") only applies to direct impact to individuals, and does not extend to habitat impacts or harassment. CDFW may issue an Incidental Take Permit under CESA to authorize take if it is incidental to otherwise lawful activity and if specific criteria are met. Take of these species is also authorized if the geographic area is covered by a Natural Community Conservation Plan (NCCP), as long as the NCCP covers that activity. CDFW may also authorize take for voluntary restoration projects through the Restoration Management Permit (RMP).

Fully Protected Species and Designated Rare Plant Species. This category includes specific plant and wildlife species that are designated in the CFGC as protected even if not listed under CESA or ESA. Fully Protected Species includes specific lists of birds, mammals, reptiles, amphibians, and fish designated in CFGC. Fully protected species may not be taken or possessed at any time. No licenses or permits may be issued for take of fully protected species, except for necessary scientific research and conservation purposes. The definition of "take" is the same under the California Fish and Game Code and the CESA. By law, CDFW may not issue an Incidental Take Permit for Fully Protected Species. Under the California Native Plant Protection Act (NPPA), CDFW has listed 64 "rare" or "endangered" plant species, and prevents "take," with few exceptions, of these species. CDFW may authorize take of species protected by the NPPA through the Incidental Take Permit process, or under a NCCP. CDFW may also authorize take for voluntary restoration projects through the Restoration Management Permit (RMP).

Special Protections for Nesting Birds and Bats. The federal Bald and Golden Eagle Protection Act provides relatively broad protections to both of North America's eagle species [bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*)] that in some regards are similar to those provided by the ESA. In addition to regulations for special-status species, most native birds in the United States, including non-status species, have baseline legal protections under the Migratory Bird Treaty Act of 1918 and CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws/codes, the intentional harm or collection of adult birds as well as the intentional collection or destruction of active nests, eggs, and young is illegal. For bat species, the Western Bat Working

Group (WBWG) designates conservation status for species of bats, and those with a high or medium-high priority are typically given special consideration under CEQA.

Species of Special Concern, Movement Corridors, and Other Special-status Species under CEQA. A Species of Special Concern (SSC) is a species formally designated by the CDFW which meets one or more criteria related to a Federal ESA status (if it is not listed under CESA), including extirpation from California, documented population declines, or small population size within California and risk of declines. In addition, CDFW has developed a special animals list as "a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status." This list includes lists developed by other organizations, including for example, the Audubon Watch List Species, the Bureau of Land Management Sensitive Species, and USFWS Birds of Conservation Concern. Plant species on the California Native Plant Society (CNPS) Rare Plant Inventory (Inventory; CNPS 2024a) with California Rare Plant Ranks (Rank) of 1 and 2, as well as some with a Rank of 3 or 4, are also considered special-status plant species and must be considered under CEQA. Some Rank 3 and Rank 4 species are typically only afforded protection under CEQA when such species are particularly unique to the locale (e.g., range limit, low abundance/low frequency, limited habitat) or are otherwise considered locally rare. Additionally, any species listed as sensitive within local plans, policies and ordinances are likewise considered sensitive. Movement and migratory corridors for native wildlife (including aquatic corridors) as well as wildlife nursery sites are given special consideration under CEQA.

2.2 Local Plans and Policies

City of Novato General Plan. The City of Novato General Plan contains policies pertaining to the following biological resources categories:

- Creeks, streams, and riparian vegetation (ES 1, ES 4)
- Wetlands (ES 6)
- Baylands and tidal areas (ES 7, ES 8)
- Wildlife habitat (ES 3)
- Plant and wildlife species (ES 11)
- Native woodlands (ES 20)
- Trees (ES 21, ES 22, ES 23)

City of Novato Tree Ordinance. Chapter 17, "Trees and Shrubs" of the Novato Municipal Code regulates the alteration and/or removal of certain trees and shrubs on private and City-owned or controlled properties within the City limits. A tree permit is required for the removal or alteration of any "heritage tree" on any private parcel or removal of one or more trees on any undeveloped private parcel in the city. A "heritage tree" is defined as: "any native or non-native woody plant: (1) characterized by having a major trunk or trunks of a diameter of 24 inches (circumference of 75 inches) or measured at 24 inches above grade; or (2) any other so designated by the city council based upon a finding that it has special historical associations due to its age, character, species, or location. A "tree" is defined as any woody native or non-native plant characterized by having a major trunk or trunks of a diameter of six inches (circumference of 19 inches) or more measured at 24 inches above existing grade. A tree permit is also required to cut, trim, prune, spray, brace, plant, move, remove, or replace any street tree or shrub within the city right-of-way. An encroachment permit shall also be obtained for work to be done in the public right-of-way.

City of Novato Woodland and Tree Preservation Ordinance. Chapter 19, Division 19.39 "Woodland and Tree Preservation" of the City Municipal Code is designed to promote the conservation of native trees, forests and woodlands on private and public lands; and the regeneration of forest or woodland on agricultural lands that were formerly forest or woodland, or have the potential for supporting forest or woodlands. This provision applies to all proposed development and new land uses on properties with native tree, forest or woodland resources, as determined by the director. The land use permit application for any project subject to this provision will require a tree inventory, as well as a Woodland Conservation and Management Plan. The tree inventory shall include a site plan showing the locations and types of all existing trees more than three inches in diameter, and shall note which trees are proposed to be removed. The Woodland Conservation and Management Plan shall be prepared by a qualified forest management professional, and shall comply with the principles outlined in Section 19.39.030, and the standards outlined in Section 19.39.040.1.

City of Novato Waterway and Riparian Protection Policy. Division 19.35, "Waterway and Riparian Protection" within Chapter XIX of the Novato Municipal Code provides standards and regulations to protect, maintain, restore, and enhance the ecological integrity and resource functions of waterways within the City. All lands adjoining or encompassing watercourses shown on "EN Map 1" of the City of Novato General Plan and their tributaries, as determined by the director, will be protected by the division. Stream Protection Zones have been established to include the stream bed, the stream banks, all riparian vegetation, and an upland buffer zone at least 50 feet wide measured from the top of the channel bank. Uses permitted within the Stream Protection Zone are limited to native landscaping, fencing, maintenance roads, utilities, storm drains, trails and passive (low-impact) recreation. A use permit is required for any proposed developments, removal or planting of vegetation, construction, or any alteration of an embankment within the Stream Protection Zone.

City of Novato Wetland Protection and Restoration. Division 19.36, "Wetland Protection and Restoration" within Chapter XIX, "Zoning" of the Novato Municipal Code provides standards and regulations to protect wetland resources. Developments must be designed and constructed to avoid all lands within the City that support wetlands as delineated by the Corps under the provisions of the CWA. A use permit is required for any project that is implemented within 50 feet of a wetland, or any project requiring wetland protection measures, involving wetland encroachment, or requiring wetland mitigation.

3.0 ASSESSMENT METHODOLOGY

WRA biologists visited the Project Area on April 20, 2022 and September 09, 2024 to map vegetation, aquatic features, and other land cover types; document plant and wildlife species present; and evaluate on-site habitat for the potential to support special-status species as defined by CEQA. Prior to the site visit, WRA biologists reviewed literature resources and performed database searches to assess the potential for sensitive land cover types and special-status species, including:

- Web Soil Survey (USDA 2024)
- Novato 7.5-minute U.S. Geological Survey (USGS) quadrangle (USGS 2024)
- Contemporary aerial photographs (Google Earth 2024)
- Historical aerial photographs (NETR 2024)
- National Wetlands Inventory (USFWS 2024a)
- California Aquatic Resources Inventory (SFEI 2024)
- CNDDB (CDFW 2024a)
- CNPS Inventory (CNPS 2024a)
- Consortium of California Herbaria (CCH1 2024, CCH2 2024)
- USFWS Information for Planning and Consultation (USFWS 2024b)
- eBird Online Database (Cornell Lab of Ornithology 2024)
- California Bird Species of Special Concern in California (Shuford and Gardali 2008)
- California Amphibian and Reptile Species of Special Concern (Thomson et al. 2016)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)
- A Manual of California Vegetation, Online Edition (CNPS 2024b)
- Preliminary Descriptions of the Terrestrial Natural Communities (Holland 1986)
- California Natural Community List (CDFW 2024b)
- Database searches (i.e., CNDDB, CNPS) for special-status species focused on the Novato USGS 7.5-minute quadrangles.

Following the remote assessment, WRA biologists completed a field review to document: (1) land cover types (e.g., vegetation communities, aquatic resources), (2) existing conditions and to determine if such provide suitable habitat for any special-status plant or wildlife species, (3) if and what type of aquatic land cover types (e.g., wetlands) are present, and (4) if special-status species are present[3].

[3] Due to the timing of the assessment, it may or may not constitute protocol-level species surveys; see Section 5.2 if the site assessment would constitute a formal or protocol-level species survey.

3.1 Vegetation Communities and Other Land Cover Types

During the site visit, WRA evaluated the species composition and area occupied by distinct vegetation communities, aquatic communities, and other land cover types. Mapping of these classifications utilized a combination of aerial imagery and ground surveys. In most instances, communities are characterized and mapped based on distinct shifts in plant assemblage (vegetation) and follow the *California Natural Community List* (CDFW 2024b) and *A Manual of California Vegetation, Online Edition* (CNPS 2024b). These resources cannot anticipate every component of every potential vegetation assemblage in California, and so in some cases, it is necessary to identify other appropriate vegetative classifications based on best professional judgment of WRA biologists. When undescribed variants are used, it is noted in the description. Vegetation alliances (natural communities) with a CDFW Rank of 1 through 3 (globally critically imperiled [S1/G1], imperiled [S2/G2], or vulnerable [S3/G3]) (CDFW 2021b), were evaluated as sensitive as part of this evaluation.

On September 9, 2024 the Project Area was reviewed for the presence of wetlands and other aquatic resources according to the methods described in the Corps Manual (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Corps 2008), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Lichvar and McColley 2008). Areas meeting these indicators were mapped as aquatic resources and categorized using the vegetation community classification methods described above. The presence of riparian habitat was evaluated based on woody plant species meeting the definition of riparian provided in *A Field Guide to Lake and Streambed Alteration Agreements, Section 1600-1607, California Fish and Game Code* (CDFG 1994) and based on best professional judgement of biologists completing the field surveys.

3.2 Special-status Species

3.2.1 General Assessment

Potential occurrence of special-status species in the Project Area was evaluated by first determining which special-status species occur in the vicinity of the Project Area through a literature and database review as described above. The presence of suitable habitat for special-status species was evaluated during the site visits based on physical and biological conditions of the site as well as the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Project Area was then determined according to the following criteria:

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Unlikely.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (i.e., CNDDB, other reports) on the site in the recent past.

If a more thorough assessment was deemed necessary, a targeted or protocol-level assessment or survey was recommended as a future study. If a special-status species was observed during the site visit, its presence was recorded and discussed below in Section 5.2. If designated critical habitat is present for a species, the extent of critical habitat present and an evaluation of critical habitat elements is provided as part of the species discussions below.

3.3 Wildlife Corridors and Native Wildlife Nursery Sites

To account for potential impacts to wildlife movement/migratory corridors, biologists reviewed maps from the California Essential Connectivity Project (CalTrans 2010), and habitat connectivity data available through the CDFW Biogeographic Information and Observation System (CDFW 2020). Additionally, aerial imagery (Google Earth 2024) for the local area was referenced to assess if local core habitat areas were present within, or connected to the Project Area. This assessment was refined based on observations of on-site physical and/or biological conditions, including topographic and vegetative factors that can facilitate wildlife movement, as well as on-site and off-site barriers to connectivity.

The potential presence of native wildlife nursery sites is evaluated as part of the site visit and discussion of individual wildlife species below. Examples of native wildlife nursery sites include nesting sites for native bird species (particularly colonial nesting sites), marine mammal pupping sites, and colonial roosting sites for other species (such as for monarch butterfly [*Danaus plexippus*]).

4.0 ECOLOGICAL SETTING

The 0.97-acre Project Area is located in Novato, Marin County, just south of the Novato Trader Joe's parking lot (7514 Redwood Blvd), between the SMART railroad and Redwood Boulevard. The Project Area includes all areas proposed to be affected by the Project. The proposed off-site mitigation area at Pacheco Creek is described in a separate report. Additional details of the local setting are below.

4.1 Soils and Topography

The overall topography of the Project Area is with elevations ranging from approximately 10-14 feet above sea level. According to SoilWeb (CSRL 2024) and Web Soil Survey (USDA 2024), the Project Area is underlain by two soil mapping units: *Urban land-Xerorthents complex, 0 to 9 percent slopes*, and *Xerorthents-Urban land complex, 0 to 9 percent slopes*. Soils within the Project Area are shown in Appendix A – Figure 3. The parent soil series of the Project Area's mapping units are summarized below.

Xerorthents-Urban Land Complex: Xerorthents consist of cut or fill areas that vary greatly in depth and drainage. Fill consists of soil, gravel, broken cement, asphalt, rock, bay mud, and other material from urban construction (USDA 1985). In some places, the original soils have been graded and the layers mixed (USDA 1985). Xerorthents have highly variable properties, depending

on the kinds and amount of fill material in the soil profile and/or the amount of cutting and grading of soils (USDA 1985). Urban land consists of areas covered by roads, driveways, houses, parking lots, and other structures (USDA 1985). Beneath these structures are rock fragments and soil material that is similar to that of the Xerorthents (USDA 1985). Runoff is rapid over urban land (USDA 1985).

4.2 Climate and Hydrology

The Project Area is located in the inland region of Novato, Marin County. The site is roughly 4 miles from San Pablo Bay. The average monthly maximum temperature in the area is 72 degrees Fahrenheit, while the average monthly minimum temperature is 44 degrees Fahrenheit. Predominantly, precipitation falls as rainfall between November and March with an annual average precipitation of 25.49 inches.

The local watershed is the San Pablo Bay watershed (HUC 8: 18050002) and the regional watershed is Burdell Mountain-Frontal San Pablo Bay Estuaries (HUC 12: 180500020606). The Project Area is located in the west central portion of the San Pablo watershed. There are no blue line streams within the Project Area (USGS 2024), and no wetland features mapped in the National Wetlands Inventory (NWI) database (USFWS 2024a). CARI maps Olive Ditch as a fluvial subsurface. (CARI; SFEI 2024). Detailed descriptions of aquatic resources are provided in Section 5.1 below.

4.3 Land Use

The majority of the Project Area is covered by ruderal herbaceous vegetation. This land cover type is characterized by areas that have been graded and mown repeatedly, and are dominated by weedy, disturbance-tolerant species. Developed areas include paved and/or gravel-covered surfaces, including Olive Avenue and Redwood Boulevard; the Novato Downtown commercial area; and the SMART railroad. Within the Project Area, Olive Ditch runs parallel to the north of Olive Avenue and flows east under the railroad prism, to an unnamed intermittent stream/ditch that flows north, parallel to the eastern edge of the railroad. Detailed land cover type descriptions are included in Section 5.1 below, and all observed plant species are included in Appendix B. Surrounding land is mostly developed and utilized by commercial businesses. (Google Earth 2024). Conditions within the Project Area have remained relatively unchanged since at least 1982, with the exception of the construction of a driveway between 2005 and 2009, connecting Olive Avenue to the commercial property to the north of the Project Area (NETR 2024). A stretch of Olive Ditch within the Project Area was culverted under the driveway during construction (NETR 2024).

5.0 ASSESSMENT RESULTS

5.1 Vegetation Communities and Other Land Cover

WRA observed three land cover types within the Project Area: developed, ruderal herbaceous vegetation, and intermittent stream/ditch. Land cover types within the Project Area are illustrated in Appendix A – Figure 4. The only sensitive land cover type within the Project Area is the intermittent stream/ditch. Table 2 below describes the status, rarity ranking, and acreage of each land cover type mapped by WRA within the Project Area. Descriptions and photos of land cover types are included in Sections 5.1.1 and 5.2.2 below.

Table 2. Vegetation Communities and Other Land Cover Types

COMMUNITY / LAND COVERS	SENSITIVE STATUS	RARITY RANKING	EXTENT WITHIN PROJECT AREA
TERRESTRIAL / COMMUNITY LAND COVER			
Developed	Non-Sensitive	None	0.39 acre
Ruderal herbaceous vegetation	Non-Sensitive	None	0.51 acre
AQUATIC RESOURCES			
Intermittent stream/ditch	Sensitive	None	0.07 acre/600 linear feet

5.1.1 Terrestrial Land Cover

Developed (no vegetation alliance). CDFW Rank: None. Developed areas are common throughout California, particularly within urban and residential areas. Within the Project Area, developed areas consist of Olive Avenue, Redwood Boulevard and the Trader Joe's driveway. This land cover type does not have an associated vegetation community, alliance, or association as it is devoid of vegetation. This community is not considered sensitive by any regulatory entity.

Photo 1. Developed area, including Olive Avenue and a gravel area associated with the SMART railroad, within the Project Area.

Ruderal Herbaceous Vegetation (multiple vegetation alliances). CDFW Rank: None. Although not described in the literature, ruderal vegetation includes areas that have been partially developed or have been used in the past. However, these areas are not currently in use and have been allowed to revert to a semi-natural condition. Ruderal herbaceous vegetation is common throughout California in both rural and urban settings. Within the Project Area, ruderal herbaceous vegetation occurs in upland areas that are unpaved but graded.

Dominant species in this land cover type include slim oat (*Avena fatua),* chicory *(Cichorium intybus*), Italian rye grass *(Festuca perennis*), prickly lettuce *(Lactuca serriola*), and Harding grass *(Phalaris aquatica*). Species richness and composition varies throughout the Project Area. This land cover type includes elements of several vegetation alliances that are too limited in extent to map separately, such as the *Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance, and *Phalaris aquatica* Herbaceous Semi-Natural Alliance. This land cover type is not considered sensitive by any regulatory entity.

Photo 2. Ruderal herbaceous vegetation (left), Olive Ditch (center), and Olive Avenue (right/top) within the Project Area.

5.1.2 Aquatic Resources

Intermittent Stream/Ditch (multiple vegetation alliances). CDFW Rank: None/S3S4

Photo 3. Olive Ditch, an intermittent stream/ditch within the Project Area.

Intermittent ditches are linear, man-made, aquatic features, typically dug in upland, that contain surface water during the wet season and dry down completely for at least part of the year. Ditches may also be classified as streams if they have a defined bed and bank and exhibit evidence of an OHWM. Intermittent ditches/streams are common in developed and partially developed areas throughout California. The Project Area contains two intermittent streams/ditches: Olive Ditch, which flows parallel to the northern edge of Olive Avenue; and an unnamed ditch, which flows parallel to the eastern edge of the SMART railroad. Intermittent stream/ditch within the Project Area is culverted under the Trader Joe's driveway, and under the railroad prism. Within the Project Area, Olive Ditch flows east to the unnamed intermittent stream/ditch, which flows north towards Rush Creek. This unnamed intermittent stream/ditch drains to Rush Creek, which is a tributary of the Petaluma River and San Pablo Bay.

Within the Project Area, the width of intermittent stream/ditch at top of bank (TOB) ranges from 12 to 17 feet. The width of intermittent stream/ditch below OHWM ranges from 1 to 12 feet, with the majority of widths ranging from 1 to 4 feet. The OHWM is characterized by a break in slope associated with a shift from hydrophytic to upland vegetation, as well as water staining on the sides of culverts. The majority of the bed and bank of daylighted intermittent stream/ditch within the Project Area is earthen, except for a headwall area of the unnamed ditch. The headwall area is concrete/sakrete-lined and receives hydrology from a confluence of culverts, including Olive Ditch to the west and Railroad Ditch to the south. Despite appearing to have a concrete bottom, sufficient sediment has accumulated on the channel bed in the headwall area to support vegetation. Ruderal herbaceous vegetation, as described in Section 5.1.1, dominates the banks of intermittent stream/ditch within the Project Area. Hydrophytic vegetation occurs below the OHWM in the channel bed. Dominant species include northern water plantain (*Alisma trivale*), tall cyperus (*Cyperus eragrostis*), bristly ox-tongue (*Helminthotheca* echioides), Dallis grass (*Paspalum dilatatum*), Himalayan blackberry (*Rubus armeniacus*), and tule (*Schoenoplectus acutus*). Vegetation below OHWM contains elements of several vegetation alliances, such as the *Paspalum* spp. Herbaceous Semi-Natural Alliance, the *Rubus armeniacus* Shrubland Semi-Natural Alliance, and the *Schoenoplectus acutus* Herbaceous Alliance, but none were large or consistent enough to map individually. Areas below the OHWM exhibited wetland characteristics, as they contained indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. At the time of the site visit, which took place during the dry season in a year of slight drought, the Project Area did not contain any standing water. As an aquatic feature, intermittent stream is considered a sensitive land cover type.

Photo 4. The headwall area of the unnamed ditch, an intermittent stream/ditch within the Project Area.

5.2 Special-status Species

5.2.1 Special-status Plants

Based upon a review of the resource databases listed in Section 3.0, 106 special-status plant species have been documented in the vicinity of the Project Area. However, the Project Area contains no habitat for any of these special-status plant species. The species documented in the vicinity are unlikely or have no potential to occur for one or more of the following:

- Hydrologic conditions (e.g., tidal, riverine) necessary to support the special-status plant species are not present in the Project Area;
- Edaphic (soil) conditions (e.g., volcanic tuff, serpentine) necessary to support the special-status plant species are not present in the Project Area;
- Topographic conditions (e.g., north-facing slope, montane) necessary to support the special-status plant species are not present in the Project Area;
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present in the Project Area;
- Associated natural communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present in the Project Area;
- The Project Area is geographically isolated (e.g., below elevation, coastal environ) from the documented range of the special-status plant species;
- The historical landscape and/or habitat(s) of the Project Area were not suitable habitat prior to land/type conversion to support the special-status plant species;
- Land use history and contemporary management (e.g., grading, mowing) has degraded the localized habitat necessary to support the special-status plant species.

5.2.2 Special-status Wildlife

Of the 39 special-status wildlife species documented in the vicinity of the Project Area, most are excluded from the Project Area based on a lack of habitat features. Features not found within the Project Area that are required to support special-status wildlife species include:

- Vernal pools
- Tidal marsh areas
- Old growth redwood or fir forest
- Serpentine soils to support host plants
- Sandy beaches or alkaline flats
- Presence of specific host plants
- Caves, mine shafts, or abandoned buildings

The absence of such habitat features eliminates components critical to the survival or movement of most special-status species found in the vicinity. Given the Project Area's relative proximity to sensitive habitats on the San Francisco Bay, many species documented nearby are additionally obligates to marine or tidal marsh habitats which are not present on or in the immediate vicinity of the Project Area.

One special-status species has potential to occur in the immediate vicinity of or in portions of the Project Area: white-tailed kite (*Elanus leucurus*).

White-tailed kite (*Elanus leucurus*). CDFW Fully Protected Species. The white-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates.

5.3 Wildlife Corridors and Native Wildlife Nursery Sites

No native wildlife nursery sites are present in the Project Area. No essential fish habitat (EFH) is mapped within the Project Area (NMFS 2024).

Wildlife movement between suitable habitat areas can occur via open space areas lacking substantial barriers. The terms “landscape linkage” and “wildlife corridor” are often used when referring to these areas. The key to a functioning corridor or linkage is that it connects two larger habitat blocks, also referred to as core habitat areas (Beier and Loe 1992; Soulé and Terbough 1999). It is useful to think of a “landscape linkage” as being valuable in a regional planning context, a broad scale mapping of natural habitat that functions to join two larger habitat blocks. The term “wildlife corridor” is useful in the context of smaller, local area planning, where wildlife movement may be facilitated by specific local biological habitats or passages and/or may be restricted by barriers to movement. Above all, wildlife corridors must link two areas of core habitat and should not direct wildlife to developed areas or areas that are otherwise void of core habitat (Hilty et al. 2019).

The Project Area is not within a designated wildlife corridor (CalTrans 2010). The site is located within a much larger tract of residential and light industrial development within a reasonably well-developed portion of Marin County. The Project Area does not provide functional connectivity between natural or semi-natural areas and other similar habitat. Common, urban-adapted wildlife species presumably utilize the site to some degree for movement at a local scale; however, the Project Area itself does not provide corridor functions beyond connecting similar ruderal or developed parcels in surrounding areas.

6.0 ANALYTICAL METHODOLOGY AND SIGNIFICANCE THRESHOLD CRITERIA

Pursuant to Appendix G, Section IV of the State CEQA Guidelines, a project would have a significant impact on biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service;

2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or U.S. Fish and Wildlife Service;
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or,
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

These thresholds were utilized in completing the analysis of potential project impacts for CEQA purposes. For the purposes of this analysis, a "substantial adverse effect" is generally interpreted to mean that a potential impact could directly or indirectly affect the resiliency or presence of a local biological community or species population. Potential impacts to natural processes that support biological communities and special-status species populations that can produce similar effects are also considered potentially significant. Impacts to individuals of a species or small areas of existing biological communities may be considered less than significant if those impacts are speculative, beneficial, de minimis, and/or would not affect the resiliency of a local population.

7.0 IMPACTS AND MITIGATION EVALUATION

Using the CEQA analysis methodology outlined in Section 6.2 above, the following section describes potential significant impacts to sensitive resources within the Project Area as well as suggested mitigation measures which are expected to reduce impacts to less than significant.

7.1 Special-status Species

This section analyzes the Project's potential impacts and mitigation for special-status species in reference to the significance threshold outlined in CEQA Appendix G, Part IV (a):

> *Does the project have the potential to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service?*

No special-status plant species have potential to occur within the Project Area. One special-status bird, white-tailed kite, may nest in trees and forage in open grassland within the Project Area or in the immediate vicinity. In addition to white-tailed kite, common bird species may also nest within the Project Area and may be similarly affected by Project activities. Project activities proposed within the Project Area may directly impact the nests of protected species or may impact these species through visual and auditory disturbance sufficient to cause nest abandonment. Due to the protected status of these species under both the Migratory Bird Treaty Act (MBTA) and CFGC,

impacts to special-status and common native nesting birds would be considered a **potentially significant impact** under CEQA.

Implementation of Mitigation Measure BIO-01 will reduce potential impacts to special-status birds and common, native nesting birds to a **less-than-significant level.**

> **Potential Impact BIO-01** Project activities could result in the destruction or abandonment of nests of special-status or non-special-status bird species protected under the MBTA, CFGC, and CEQA.

To reduce potential impacts to special-status birds and native nesting birds to a less-than-significant level, the following measure would be implemented:

> **Mitigation Measure BIO-01**: To the extent feasible, Project-related activities shall be avoided during the nesting bird season, generally defined as February 1 – August 31. If Project work must occur during the nesting bird season, pre-construction nesting bird surveys shall be conducted within 7 days of initial ground disturbance in new areas to avoid disturbance to active nests, eggs, and/or young of nesting birds. These surveys would determine the presence or absence of active nests that may be affected by Project activities. It is also recommended that any trees and shrubs in or adjacent to the Project Site that are proposed for removal and could be used as avian nesting sites be removed during the non-nesting season (September 1 through January 31).
>
> If an active nest is located, a no-disturbance buffer shall be established around the nest until all young have fledged or the nest otherwise becomes inactive (e.g., due to predation). Suggested buffer zone distances differ depending on species, location, baseline conditions, and placement of nest and would be determined and implemented in the field by a qualified biologist.

Implementation of this mitigation measure will reduce potential impacts to special-status birds and common, native nesting birds to a **less-than-significant level.**

7.2 Sensitive Natural Communities and Land Cover Types

This section addresses the question:

> b) *Does the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or U.S. Fish and Wildlife Service;*

The Project Area includes one sensitive natural community: intermittent stream/ditch. Potential impacts to intermittent stream/ditch are discussed below under Section 7.3. To reduce potential temporary and indirect impacts to intermittent stream/ditch to a less-than-significant level, mitigation measures BIO-02 and BIO-03, discussed under Section 7.3 below, shall be implemented. Implementation of these mitigation measures will reduce potential impacts to sensitive natural communities and land cover types to a level that is ***less than significant***.

7.3 Aquatic Resources

This section analyzes the Project's potential impacts and mitigation for wetlands and other areas presumed or determined to be within the jurisdiction of the Corps or BCDC in reference to the significance threshold outlined in CEQA Appendix G, Part IV (c):

c) Does the Project have the potential to have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

The Project Area includes approximately 0.07 acre (600 linear feet) of intermittent stream/ditch. Impacts to intermittent stream/ditch would be considered a **significant impact** under CEQA.

Potential Impact BIO-02: Culvert and headwall installation would result in permanent impacts to 0.07 acre (600 linear feet) of the intermittent stream/ditch, as shown in Appendix A, Figure 5. Olive Ditch is potentially subject to the jurisdictions of the Corps, RWQCB, and CDFW.

Potential Impact BIO-03: Construction activities could result in runoff, which would indirectly impact the intermittent stream/ditch, including portions of the intermittent stream/ditch north of the proposed headwall location.

To reduce potential temporary and indirect impacts to intermittent stream/ditch to a less-than-significant level, the following measures should be implemented:

Mitigation Measure BIO-02: Permit applications shall be submitted to the Corps, RWQCB, and CDFW for the Olive Avenue Widening Project. These applications shall propose compensatory mitigation at a City-owned parcel that includes a section of Pacheco Creek, an intermittent stream with in-channel wetlands and a riparian canopy. Enhancement activities shall include the removal of invasive weeds, trash, and debris, and planting of native riparian vegetation. Compensatory mitigation shall be proposed at a 2:1 ratio by area (mitigation to impact), and a 1:1 ratio by length.

Mitigation Measure BIO-03: General avoidance and minimization measures that shall be implemented during the proposed Project shall minimize indirect impacts to the intermittent stream/ditch. All permit conditions, legal requirements, and appropriate engineering practices associated with the proposed Project shall be followed. Best Management Practices (BMPs) as identified by RWQCB, Corps, and CDFW shall be adhered to. General measures to be implemented as part of the Project include the following:

- All construction shall occur during the dry season (May 15 through October 15) and shall be suspended during unseasonable rainfalls of greater than one-half inch over a 24-hour period. Activities shall not resume until at least 24 hours have elapsed since the cessation of visible rain.
- No fueling, cleaning, or maintenance of vehicles or equipment shall take place within any areas where an accidental discharge may cause hazardous materials to enter waterways.
- Any equipment or vehicles used for enhancement activities shall be checked and maintained daily to prevent leaks of fluids that could be deleterious to aquatic habitats.
- All equipment shall be cleaned before arriving on the site and before removal from the site to prevent spread of invasive plants.
- Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be located outside of the stream channel banks.

- If any activities require the use of heavy equipment near aquatic features, they shall have absorbent materials designated for spill containment and cleanup activities on-site for use in an accidental spill.
- Stockpiles of excavated soil or other shall be covered when not in active use (i.e., shall not be used, or moved for 72 hours). All trucks hauling soil, sand, and other loose materials shall be covered.
- At the end of the Project, all temporary flagging, fencing, or other materials shall be removed from the Project Area and vicinity of the intermittent stream/ditch.
- No equipment shall be washed or rinsed where runoff could enter aquatic featres.
- All refueling and maintenance of equipment, other than stationary equipment, shall occur outside of the top-of-bank.

7.4 Wildlife Corridors and Native Wildlife Nursery Sites

This section analyzes the Project's potential impacts and mitigation for habitat corridors and linkages in reference to the significance threshold outlined in CEQA Appendix G, Part IV (d):

> *d) Does the Project have the potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;*

As noted in Section 3.2.6, no portions of the Project Area provide connectivity between areas of suitable habitat. For terrestrial species, all portions of the Project Area occur within a greater context of urban development, and for aquatic species, there is no connectivity between the Project Area and upstream freshwater habitats or downstream saltwater habitats. **No impact** will occur to migratory corridors for terrestrial and aquatic species as a result of the Project.

7.5 Local Policies and Ordinances

This section analyzes the Project's potential impacts and mitigation based on conflicts with local policies and ordinances in reference to the significance threshold outlined in CEQA Appendix G, Part IV (e):

> *e) Does the Project have the potential to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;*

Local plans and policies related to biological resources examined in this analysis are:

- **City of Novato Tree Ordinance.** The Project would not include the removal any trees, the Project would not conflict with the City of Novato Tree Ordinance.
- **City of Novato Woodland and Tree Preservation Ordinance.** The Project Area does not include native trees or woodlands on public lands. Therefore, the Project would not conflict with the City of Novato Woodland and Tree Preservation Ordinance.
- **City of Novato Stream and Riparian Setback Policy.** The Study Area includes 600 linear feet of intermittent stream/ditch. Activities within the Stream Protection Zone, 50 feet

from the top of the channel bank, typically require a use permit from the City. However, because all work is being conducted in the City right-of-way, under contract with the City, a use permit would not be required for the Project. Therefore, the Project would not conflict with the City of Novato Riparian Setback Policy.

- **City of Novato Wetland Protection and Restoration.** The intermittent stream/ditch, below the OHWM, contains wetland habitat. However, because all work is being conducted in the City right-of-way, under contract with the City, a use permit would not be required for the Project. Therefore, the Project would not conflict with the City of Novato Wetland Protection and Restoration Policy.

The Project would not conflict with any of the local plans or policies related to biological resources examined in this analysis. Therefore, there is **no conflict** with local policies and ordinances.

7.6 Habitat Conservation Plans

This section analyzes the Project's potential impacts and mitigation based on conflicts with any adopted local, regional, and state habitat conservation plans in reference to the significance threshold outlined in CEQA Appendix G, Part IV (f):

> *f) Does the Project have the potential to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

The Project Area is not located in an area that is subject to the provisions of a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the Project would not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, there is **no conflict** with any habitat conservation plans

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APPENDIX A. FIGURES

Path: L:\Acad 2000 Files\27000\27346\GIS\ArcMap\2023\27346_Base\27346_Base.aprx Layout Name:BRTR_Fig1_Location_C_Limit

Sources: National Geographic, WRA | Prepared By: njander, 10/30/2024

Figure 1. Project Area Location

Olive Avenue Widening Project
Novato, Marin County, California

wra Environmental Consultants

Path: L:\Acad 2000 Files\27000\27346\GIS\ArcMap\2023\27346_Base\27346_Base.aprx Layout Name: BRTR_Fig2_Aerial_C_Limit

Sources: USDA NAIP Imagery 2022, WRA | Prepared By: njander, 10/30/2024

Figure 2. Aerial Photograph of the Project Area

Olive Avenue Widening Project
Novato, Marin County, California

0 50 100 Feet

N

wra Environmental Consultants

Path: L:\Acad 2000 Files\27000\27346\GIS\ArcMap\2023\27346_Base\27346_Base.aprx Layout Name: BRTR_Fig3_Soils_C_Limit

Sources: USDA NAIP Imagery 2022, USDA NRCS SSURGO, WRA | Prepared By: njander, 10/30/2024

Figure 3. Project Area Soils

Olive Avenue Widening Project
Novato, Marin County, California

wra Environmental Consultants

Path: L:\Acad 2000 Files\27000\27346\GIS\ArcMap\2023\27346_Base\27346_Base.aprx Layout Name: BRTR_Fig4_Land Cover Types_C_Limit

Sources: USDA NAIP Imagery 2020, WRA | Prepared By: njander, 11/1/2024

Figure 4. Land Cover Types within the Project Area

Olive Avenue Widening Project
Novato, Marin County, California

0 50 100 Feet

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wra Environmental Consultants

Figure 5. Impacts within the Project Area

Olive Avenue Widening Project
Novato, Marin County, California

0 50 100 Feet

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APPENDIX B. SPECIES OBSERVED IN AND AROUND THE PROJECT AREA

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Plant Species Observed within the Project Area on April 20, 2022 and September 09, 2024

Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]	Wetland Status[3]
Alisma trivale	Water plantain	native	perennial herb	-	-	OBL
Amaranthus retroflexus	Rough pigweed	non-native	annual herb	-	-	FACU
Avena fatua	Wildoats	non-native (invasive)	annual grass	-	Moderate	
Bromus diandrus	Ripgut brome	non-native (invasive)	annual grass	-	Moderate	-
Carduus pycnocephalus **ssp. pycnocephalus**	Italian thistle	non-native (invasive)	annual herb	-	Moderate	
Centaurea solstitialis	Yellow starthistle	non-native (invasive)	annual herb	-	High	-
Cichorium intybus	Chicory	non-native	perennial herb	-	-	FACU
Convolvulus arvensis	Field bindweed	non-native	perennial herb, vine	-	-	-
Cynodon dactylon	Bermuda grass	non-native (invasive)	perennial grass	-	Moderate	FACU
Cyperus eragrostis	Tall cyperus	native	perennial grasslike herb	-	-	FACW
Dittrichia graveolens	Stinkwort	non-native (invasive)	annual herb	-	Moderate	
Epilobium brachycarpum	Panicled willow herb	native	annual herb	-	-	FAC
Erodium cicutarium	Red stemmed filaree	non-native (invasive)	annual herb	-	Limited	-
Euphorbia **sp.**	Spurges					
Festuca perennis	Italian rye grass	non-native (invasive)	annual, perennial grass	-	Moderate	FAC
Galium aparine	Cleavers	native	annual herb	-	-	FACU
Helminthotheca echioides	Bristly ox-tongue	non-native (invasive)	annual, perennial herb	-	Limited	FAC
Hirschfeldia incana	Short-podded mustard	non-native (invasive)	perennial herb	-	Moderate	

Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]	Wetland Status[3]
Lactuca serriola	Prickly lettuce	non-native	annual herb	-	-	FACU
Paspalum dilatatum	Dallis grass	non-native	perennial grass	-	-	FAC
Phalaris aquatica	Harding grass	non-native (invasive)	perennial grass	-	Moderate	FACU
Plantago lanceolata	Ribwort	non-native (invasive)	perennial herb	-	Limited	FAC
Polygonum aviculare	Prostrate knotweed	non-native	annual, perennial herb	-	-	FAC
Portulaca oleracea	Common purslane	non-native	annual herb	-	-	FAC
Quercus agrifolia	Coast live oak	native	tree	-	-	-
Raphanus sativus	Wild radish	non-native (invasive)	annual, biennial herb	-	Limited	-
***Rosa* sp.**	Rose					
Rubus armeniacus	Himalayan blackberry	non-native (invasive)	shrub	-	High	FAC
Rumex crispus	Curly dock	non-native (invasive)	perennial herb	-	Limited	FAC
***Schoenoplectus acutus* var. occidentalis**	Tule	native	perennial grasslike herb	-	-	OBL
Torilis arvensis	Field hedge parsley	non-native (invasive)	annual herb	-	Moderate	-
Tribulus terrestris	Puncture vine	non-native (invasive)	annual herb	-	Limited	-
Vitis californica	California wild grape	native	vine, shrub	-	-	FACU

Note: All species identified using the *Jepson eFlora* [Jepson Flora Project (eds.) 2024]; nomenclature follows *Jepson eFlora* [Jepson Flora Project (eds.) 2024] or Rare Plant Inventory (CNPS 2024a). Sp.: "species", intended to indicate that the observer was confident in the identity of the genus but uncertain which species.

WILDLIFE		
BIRDS		
SCIENTIFIC NAME	**COMMON NAME**	**STATUS**
Corvus brachyrhynchos	American crow	None
Aphelocoma californica	California scrub jay	None
Passer domesticus	House sparrow	None
Cathartes aura	Turkey vulture	None
Ardea alba	Great egret	None
Columba livia	Rock pigeon	None
REPTILES/AMPHIBIANS		
SCIENTIFIC NAME	**COMMON NAME**	**STATUS**
Sceloporus occidentalis	Western fence lizard	None
INVERTEBRATES		
SCIENTIFIC NAME	**COMMON NAME**	**STATUS**
Apis mellifera	Honey bee	None
Anthophora abrupta	Miner bee	None
Pieris rapae	Cabbage white	None

[1] **California Native Plant Society. 2024. Rare Plant Inventory (online edition, v9.5). Sacramento, California. Online at: http://rareplants.cnps.org/; most recently accessed: November 2024.**

FE:	Federal Endangered
FT:	Federal Threatened
SE:	State Endangered
ST:	State Threatened
SR:	State Rare
Rank 1A:	Plants presumed extinct in California
Rank 1B:	Plants rare, threatened, or endangered in California and elsewhere
Rank 2:	Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3:	Plants about which we need more information – a review list
Rank 4:	Plants of limited distribution – a watch list

[2] **California Invasive Plant Council. 2024. California Invasive Plant Inventory Database. California Invasive Plant Council, Berkeley, CA. Online at: http://www.cal-ipc.org/paf/; most recently accessed: November 2024.**

High:	Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
Moderate:	Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited-moderate distribution ecologically
Limited:	Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
Assessed:	Assessed by Cal-IPC and determined to not be an existing current threat

[3] **U.S. Army Corps of Engineers. 2022. National Wetland Plant List, version 3.6. Engineer Research and Development Center. Cold Regions Research and Engineering Laboratory, Hanover, NH. Online at: http://wetland-plants.sec.usace.army.mil/**

OBL:	Almost always found in wetlands
FACW:	Usually found in wetlands
FAC:	Equally found in wetlands and uplands
FACU:	Usually not found in wetlands
UPL:	Almost never found in wetlands
NL:	Not listed, assumed almost never found in wetlands
NI:	No information; not factored during wetland delineation

APPENDIX C. SPECIAL-STATUS SPECIES POTENTIAL TABLE

Appendix C. Potential for Special Status Plant and Wildlife Species to Occur within the Project Area.

List Compiled from the California Department of Fish and Wildlife Natural Diversity Database (CDFW 2024), U.S. Fish and Wildlife Service Information for Planning and Consultation Species Lists (USFWS 2024b), and California Native Plant Society Rare Plant Inventory (CNPS 2024a) search of the Novato, San Geronimo, Petaluma, Petaluma River, Sears Point, Petaluma Point, San Quentin, San Rafael, and Bolinas U.S. Geological Survey 7.5' quadrangles.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
		PLANTS		
Franciscan onion (*Allium peninsulare* var. *franciscanum*)	Rank 1B.2	Cismontane woodland, valley and foothill grassland. Elevation ranges from 170 to 1000 feet (52 to 305 meters). Blooms (Apr)May-Jun.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
Sonoma alopecurus (*Alopecurus aequalis* var. *sonomensis*)	FE, Rank 1B.1	Marshes and swamps (freshwater), riparian scrub. Elevation ranges from 15 to 1200 feet (5 to 365 meters). Blooms May-Jul.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Napa false indigo (*Amorpha californica* var. *napensis*)	Rank 1B.2	Broadleafed upland forest (openings), chaparral, cismontane woodland. Elevation ranges from 165 to 6560 feet (50 to 2000 meters). Blooms Apr-Jul.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
bent-flowered fiddleneck (*Amsinckia lunaris*)	Rank 1B.2	Cismontane woodland, coastal bluff scrub, valley and foothill grassland. Elevation ranges from 10 to 1640 feet (3 to 500 meters). Blooms Mar-Jun.	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
coast rockcress (*Arabis blepharophylla*)	Rank 4.3	Broadleafed upland forest, coastal bluff scrub, coastal prairie, coastal scrub. Elevation ranges from 10 to 3610 feet (3 to 1100 meters). Blooms Feb-May.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Mt. Tamalpais manzanita (*Arctostaphylos montana* ssp. *montana*)	Rank 1B.3	Chaparral, valley and foothill grassland. Elevation ranges from 525 to 2495 feet (160 to 760 meters). Blooms Feb-Apr.	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
Marin manzanita (*Arctostaphylos virgata*)	Rank 1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, north coast coniferous forest. Elevation ranges from 195 to 2295 feet (60 to 700 meters). Blooms Jan-Mar.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Carlotta Hall's lace fern (*Aspidotis carlotta-halliae*)	Rank 4.2	Chaparral, cismontane woodland. Elevation ranges from 330 to 4595 feet (100 to 1400 meters). Blooms Jan-Dec.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Brewer's milk-vetch (*Astragalus breweri*)	Rank 4.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (openings, often gravelly). Elevation ranges from 295 to 2395 feet (90 to 730 meters). Blooms Apr-Jun.	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
coastal marsh milk-vetch (*Astragalus pycnostachyus* var. *pycnostachyus*)	Rank 1B.2	Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt, streamsides). Elevation ranges from 0 to 180 feet (0 to 55 meters). Blooms (Apr-May)Jun-Oct.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
alkali milk-vetch (*Astragalus tener* var. *tener)*	Rank 1B.2	Playas, valley and foothill grassland (adobe clay), vernal pools. Elevation ranges from 5 to 195 feet (1 to 60 meters). Blooms Mar-Jun.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
Sonoma sunshine (*Blennosperma bakeri*)	FE, SE, Rank 1B.1	Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 35 to 360 feet (10 to 110 meters). Blooms Mar-May.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
Thurber's reed grass (*Calamagrostis crassiglumis*)	Rank 2B.1	Coastal scrub (mesic), marshes and swamps (freshwater). Elevation ranges from 35 to 195 feet (10 to 60 meters). Blooms May-Aug.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
serpentine reed grass (*Calamagrostis ophitidis*)	Rank 4.3	Chaparral (openings, often north-facing slopes), lower montane coniferous forest, meadows and seeps, valley and foothill grassland. Elevation ranges from 295 to 3495 feet (90 to 1065 meters). Blooms Apr-Jul.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Brewer's calandrinia (*Calandrinia breweri*)	Rank 4.2	Chaparral, coastal scrub. Elevation ranges from 35 to 4005 feet (10 to 1220 meters). Blooms (Jan)Mar-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Tiburon mariposa-lily (*Calochortus tiburonensis*)	FT, ST, Rank 1B.1	Valley and foothill grassland (serpentine). Elevation ranges from 165 to 490 feet (50 to 150 meters). Blooms Mar-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Oakland star-tulip (*Calochortus umbellatus*)	Rank 4.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 330 to 2295 feet (100 to 700 meters). Blooms Mar-May.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
pink star-tulip (*Calochortus uniflorus*)	Rank 4.2	Coastal prairie, coastal scrub, meadows and seeps, north coast coniferous forest. Elevation ranges from 35 to 3510 feet (10 to 1070 meters). Blooms Apr-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Mt. Saint Helena morning-glory (*Calystegia collina* ssp. *oxyphylla)*	Rank 4.2	Chaparral, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 915 to 3315 feet (279 to 1010 meters). Blooms Apr-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
seaside bittercress (*Cardamine angulate)*	Rank 2B.2	Lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 50 to 3000 feet (15 to 915 meters). Blooms (Jan)Mar-Jul.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Lyngbye's sedge (*Carex lyngbyei*)	Rank 2B.2	Marshes and swamps (brackish, freshwater). Elevation ranges from 0 to 35 feet (0 to 10 meters). Blooms Apr-Aug.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Tiburon paintbrush (*Castilleja affinis* var. *neglecta*)	FE, ST, Rank 1B.2	Valley and foothill grassland (serpentine). Elevation ranges from 195 to 1310 feet (60 to 400 meters). Blooms Apr-Jun.	**No potential.** the Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
johnny-nip (*Castilleja ambigua* var. *ambigua*)	Rank 4.2	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pools (margins). Elevation ranges from 0 to 1425 feet (0 to 435 meters). Blooms Mar-Aug.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
Nicasio ceanothus (*Ceanothus decornutus*)	Rank 1B.2	Chaparral (maritime). Elevation ranges from 770 to 950 feet (235 to 290 meters). Blooms Mar-May.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
glory brush (*Ceanothus gloriosus var. exaltatus*)	Rank 4.3	Chaparral. Elevation ranges from 100 to 2000 feet (30 to 610 meters). Blooms Mar-Jun(Aug).	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Point Reyes ceanothus (*Ceanothus gloriosus* var. *gloriosus*)	Rank 4.3	Closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal scrub. Elevation ranges from 15 to 1705 feet (5 to 520 meters). Blooms Mar-May.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Mason's ceanothus (*Ceanothus masonii*)	SR, Rank 1B.2	Chaparral (openings, rocky, serpentine). Elevation ranges from 755 to 1640 feet (230 to 500 meters). Blooms Mar-Apr.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Kern ceanothus (*Ceanothus pinetorum*)	Rank 4.3	Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest. Elevation ranges from 3410 to 9005 feet (1040 to 2745 meters). Blooms May-Jul.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
pappose tarplant (*Centromadia parryi* ssp. *parryi*)	Rank 1B.2	Chaparral, coastal prairie, marshes and swamps (coastal salt), meadows and seeps, valley and foothill grassland (vernally mesic). Elevation ranges from 0 to 1380 feet (0 to 420 meters). Blooms May-Nov.	**Unlikely.** The Project Area does not contain alkaline soils to support this species.	No further recommendations are required.
Point Reyes salty bird's-beak (*Chloropyron maritimum* ssp. *palustre*)	Rank 1B.2	Marshes and swamps (coastal salt). Elevation ranges from 0 to 35 feet (0 to 10 meters). Blooms Jun-Oct.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
soft salty bird's-beak (*Chloropyron molle* ssp. *molle*)	FE, SR, Rank 1B.2	Marshes and swamps (coastal salt). Elevation ranges from 0 to 10 feet (0 to 3 meters). Blooms Jun-Nov.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
San Francisco Bay spineflower (*Chorizanthe cuspidata* var. *cuspidate*)	Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub. Elevation ranges from 10 to 705 feet (3 to 215 meters). Blooms Apr-Jul(Aug).	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Sonoma spineflower (*Chorizanthe valida*)	FE, SE, Rank 1B.1	Coastal prairie (sandy). Elevation ranges from 35 to 1000 feet (10 to 305 meters). Blooms Jun-Aug.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Mt. Tamalpais thistle (*Cirsium hydrophilum* var. *vaseyi*)	Rank 1B.2	Broadleafed upland forest, chaparral, meadows and seeps. Elevation ranges from 785 to 2035 feet (240 to 620 meters). Blooms May-Aug.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
seaside cistanthe (*Cistanthe maritima*)	Rank 4.2	Coastal bluff scrub, coastal scrub, valley and foothill grassland. Elevation ranges from 15 to 985 feet (5 to 300 meters). Blooms (Feb)Mar-Jun(Aug).	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
round-headed collinsia (*Collinsia corymbose*)	Rank 1B.2	Coastal dunes. Elevation ranges from 0 to 65 feet (0 to 20 meters). Blooms Apr-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
serpentine collomia (*Collomia diversifolia*)	Rank 4.3	Chaparral, cismontane woodland. Elevation ranges from 655 to 1970 feet (200 to 600 meters). Blooms May-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
California lady's-slipper (*Cypripedium californicum*)	Rank 4.2	Bogs and fens, lower montane coniferous forest. Elevation ranges from 100 to 9025 feet (30 to 2750 meters). Blooms Apr-Aug(Sep).	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Baker's larkspur (*Delphinium bakeri*)	FE, SE, Rank 1B.1	Broadleafed upland forest, coastal scrub, valley and foothill grassland. Elevation ranges from 260 to 1000 feet (80 to 305 meters). Blooms Mar-May.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
golden larkspur (*Delphinium luteum*)	FE, SR, Rank 1B.1	Chaparral, coastal prairie, coastal scrub. Elevation ranges from 0 to 330 feet (0 to 100 meters). Blooms Mar-May.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
silverskin lichen (*Dermatocarpon meiophyllizum*)	Rank 2B.3	Coastal prairie, lower montane coniferous forest, north coast coniferous forest, subalpine coniferous forest, upper montane coniferous forest. Elevation ranges from 970 to 11465 feet (295 to 3495 meters). Blooms .	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
western dichondra (*Dichondra occidentalis*)	Rank 4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation ranges from 165 to 1640 feet (50 to 500 meters). Blooms (Jan)Mar-Jul.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
western leatherwood (*Dirca occidentalis*)	Rank 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, closed-cone coniferous forest, north coast coniferous forest, riparian forest, riparian woodland. Elevation ranges from 80 to 1395 feet (25 to 425 meters). Blooms Jan-Mar(Apr).	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
dwarf downingia (*Downingia pusilla*)	Rank 2B.2	Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 5 to 1460 feet (1 to 445 meters). Blooms Mar-May.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
small spikerush (*Eleocharis parvula*)	Rank 4.3	Marshes and swamps. Elevation ranges from 5 to 9910 feet (1 to 3020 meters). Blooms (Apr)Jun-Aug(Sep).	No potential. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
California bottle-brush grass (*Elymus californicus*)	Rank 4.3	Broadleafed upland forest, cismontane woodland, north coast coniferous forest, riparian woodland. Elevation ranges from 50 to 1540 feet (15 to 470 meters). Blooms May-Aug(Nov).	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Koch's cord moss (*Entosthodon kochii*)	Rank 1B.3	Cismontane woodland (soil). Elevation ranges from 590 to 3280 feet (180 to 1000 meters). Blooms .	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
streamside daisy (*Erigeron biolettii*)	Rank 3	Broadleafed upland forest, cismontane woodland, north coast coniferous forest. Elevation ranges from 100 to 3610 feet (30 to 1100 meters). Blooms Jun-Oct.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Tiburon buckwheat (*Eriogonum luteolum var. caninum*)	Rank 1B.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 0 to 2295 feet (0 to 700 meters). Blooms May-Sep.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
Jepson's coyote-thistle (*Eryngium jepsonii*)	Rank 1B.2	Valley and foothill grassland, vernal pools. Elevation ranges from 10 to 985 feet (3 to 300 meters). Blooms Apr-Aug.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
San Francisco wallflower (*Erysimum franciscanum*)	Rank 4.2	Chaparral, coastal dunes, coastal scrub, valley and foothill grassland. Elevation ranges from 0 to 1805 feet (0 to 550 meters). Blooms Mar-Jun.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
bare monkeyflower (*Erythranthe nudata*)	Rank 4.3	Chaparral, cismontane woodland. Elevation ranges from 655 to 2295 feet (200 to 700 meters). Blooms May-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
minute pocket moss (*Fissidens pauperculus*)	Rank 1B.2	North coast coniferous forest (damp coastal soil). Elevation ranges from 35 to 3360 feet (10 to 1024 meters). Blooms .	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Marin checker lily (*Fritillaria lanceolata* var. *tristulis*)	Rank 1B.1	Coastal bluff scrub, coastal prairie, coastal scrub. Elevation ranges from 50 to 490 feet (15 to 150 meters). Blooms Feb-May.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
fragrant fritillary (*Fritillaria liliacea*)	Rank 1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 10 to 1345 feet (3 to 410 meters). Blooms Feb-Apr.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
blue coast gilia (*Gilia capitata* ssp. *chamissonis*)	Rank 1B.1	Coastal dunes, coastal scrub. Elevation ranges from 5 to 655 feet (2 to 200 meters). Blooms Apr-Jul.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
woolly-headed gilia (*Gilia capitata* ssp. *tomentosa*)	Rank 1B.1	Coastal bluff scrub, valley and foothill grassland. Elevation ranges from 35 to 720 feet (10 to 220 meters). Blooms May-Jul.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
dark-eyed gilia (*Gilia millefoliata*)	Rank 1B.2	Coastal dunes. Elevation ranges from 5 to 100 feet (2 to 30 meters). Blooms Apr-Jul.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
San Francisco gumplant (*Grindelia hirsutula* var. *maritima*)	Rank 3.2	Coastal bluff scrub, coastal scrub, valley and foothill grassland. Elevation ranges from 50 to 1310 feet (15 to 400 meters). Blooms Jun-Sep.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Diablo helianthella (*Helianthella castanea*)	Rank 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Elevation ranges from 195 to 4265 feet (60 to 1300 meters). Blooms Mar-Jun.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*)	Rank 1B.2	Valley and foothill grassland. Elevation ranges from 65 to 1835 feet (20 to 560 meters). Blooms Apr-Nov.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	This species was not detectable during a rare plant survey conducted on September 9, 2024, due to mowing of the site. A protocol-level plant survey should be conducted during the bloom period (April to November), or when+D39+E71
Marin western flax (*Hesperolinon congestum*)	FT, ST, Rank 1B.1	Chaparral, valley and foothill grassland. Elevation ranges from 15 to 1215 feet (5 to 370 meters). Blooms Apr-Jul.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Santa Cruz tarplant (*Holocarpha macradenia*)	FT, SE, Rank 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 35 to 720 feet (10 to 220 meters). Blooms Jun-Oct.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
thin-lobed horkelia (*Horkelia tenuiloba*)	Rank 1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland. Elevation ranges from 165 to 1640 feet (50 to 500 meters). Blooms May-Jul(Aug).	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
harlequin lotus (*Hosackia gracilis*)	Rank 4.2	Broadleafed upland forest, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, meadows and seeps, north coast coniferous forest, valley and foothill grassland. Elevation ranges from 0 to 2295 feet (0 to 700 meters). Blooms Mar-Jul.	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
coast iris (*Iris longipetala*)	Rank 4.2	Coastal prairie, lower montane coniferous forest, meadows and seeps. Elevation ranges from 0 to 1970 feet (0 to 600 meters). Blooms Mar-May(Jun).	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)	Rank 4.2	Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt), meadows and seeps (alkaline seeps). Elevation ranges from 10 to 2955 feet (3 to 900 meters). Blooms (Mar)May-Jun.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
small groundcone (*Kopsiopsis hookeri*)	Rank 2B.3	Lower montane coniferous forest, north coast coniferous forest, upper montane coniferous forest. Elevation ranges from 295 to 2905 feet (90 to 885 meters). Blooms Apr-Aug.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Contra Costa goldfields (*Lasthenia conjugens*)	FE, Rank 1B.1	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1540 feet (0 to 470 meters). Blooms Mar-Jun.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
bristly leptosiphon (*Leptosiphon aureus*)	Rank 4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 180 to 4920 feet (55 to 1500 meters). Blooms Apr-Jul.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
large-flowered leptosiphon (*Leptosiphon grandifloras*)	Rank 4.2	Cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 15 to 4005 feet (5 to 1220 meters). Blooms Apr-Aug.	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
woolly-headed lessingia (*Lessingia hololeuca*)	Rank 3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 50 to 1000 feet (15 to 305 meters). Blooms Jun-Oct.	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Tamalpais lessingia (*Lessingia micradenia* var. *micradenia*)	Rank 1B.2	Chaparral, valley and foothill grassland. Elevation ranges from 330 to 1640 feet (100 to 500 meters). Blooms (Jun)Jul-Oct.	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
Pitkin Marsh lily (*Lilium pardalinum* ssp. *pitkinense*)	FE, SE, Rank 1B.1	Cismontane woodland, marshes and swamps (freshwater), meadows and seeps. Elevation ranges from 115 to 215 feet (35 to 65 meters). Blooms Jun-Jul.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Mt. Diablo cottonweed (*Micropus amphiboles*)	Rank 3.2	Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 150 to 2705 feet (45 to 825 meters). Blooms Mar-May.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
marsh microseris (*Microseris paludosa*)	Rank 1B.2	Cismontane woodland, closed-cone coniferous forest, coastal scrub, valley and foothill grassland. Elevation ranges from 15 to 1165 feet (5 to 355 meters). Blooms Apr-Jun(Jul).	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
elongate copper moss (*Mielichhoferia elongata*)	Rank 4.3	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, subalpine coniferous forest. Elevation ranges from 0 to 6430 feet (0 to 1960 meters). Blooms .	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
cotula navarretia (*Navarretia cotulifolia*)	Rank 4.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 15 to 6005 feet (4 to 1830 meters). Blooms May-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*)	Rank 1B.1	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 15 to 5710 feet (5 to 1740 meters). Blooms Apr-Jul.	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
Marin County navarretia (*Navarretia rosulata*)	Rank 1B.2	Chaparral, closed-cone coniferous forest. Elevation ranges from 655 to 2085 feet (200 to 635 meters). Blooms May-Jul.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
white-rayed pentachaeta (*Pentachaeta bellidiflora*)	FE, SE, Rank 1B.1	Cismontane woodland, valley and foothill grassland (often serpentine). Elevation ranges from 115 to 2035 feet (35 to 620 meters). Blooms Mar-May.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Gairdner's yampah (*Perideridia gairdneri* ssp. *gairdneri*)	Rank 4.2	Broadleafed upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools. Elevation ranges from 0 to 2000 feet (0 to 610 meters). Blooms Jun-Oct.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Michael's rein orchid (*Piperia michaelii*)	Rank 4.2	Chaparral, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal scrub, lower montane coniferous forest. Elevation ranges from 10 to 3000 feet (3 to 915 meters). Blooms Apr-Aug.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
hairless popcornflower (*Plagiobothrys glaber*)	Rank 1A	Marshes and swamps (coastal salt), meadows and seeps (alkaline). Elevation ranges from 50 to 590 feet (15 to 180 meters). Blooms Mar-May.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Petaluma popcornflower (*Plagiobothrys mollis* var. *vestitus*)	Rank 1A	Marshes and swamps (coastal salt), valley and foothill grassland (mesic). Elevation ranges from 35 to 165 feet (10 to 50 meters). Blooms Jun-Jul.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
North Coast semaphore grass (*Pleuropogon hooverianus*)	ST, Rank 1B.1	Broadleafed upland forest, meadows and seeps, north coast coniferous forest. Elevation ranges from 35 to 2200 feet (10 to 671 meters). Blooms Apr-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
nodding semaphore grass (*Pleuropogon refractus*)	Rank 4.2	Lower montane coniferous forest, meadows and seeps, north coast coniferous forest, riparian forest. Elevation ranges from 0 to 5250 feet (0 to 1600 meters). Blooms (Feb-Mar)Apr-Aug.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Marin knotweed (*Polygonum marinense*)	Rank 3.1	Marshes and swamps (brackish, coastal salt). Elevation ranges from 0 to 35 feet (0 to 10 meters). Blooms (Apr)May-Aug(Oct).	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Tamalpais oak (*Quercus parvula* var. *tamalpaisensis*)	Rank 1B.3	Lower montane coniferous forest. Elevation ranges from 330 to 2460 feet (100 to 750 meters). Blooms Mar-Apr.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Lobb's aquatic buttercup (*Ranunculus lobbii*)	Rank 4.2	Cismontane woodland, north coast coniferous forest, valley and foothill grassland, vernal pools. Elevation ranges from 50 to 1540 feet (15 to 470 meters). Blooms Feb-May.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Sanford's arrowhead (*Sagittaria sanfordii*)	Rank 1B.2	Marshes and swamps (shallow freshwater). Elevation ranges from 0 to 2135 feet (0 to 650 meters). Blooms May-Oct(Nov).	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Point Reyes checkerbloom (*Sidalcea calycosa* ssp. *rhizomata*)	Rank 1B.2	Marshes and swamps (freshwater, near coast). Elevation ranges from 10 to 245 feet (3 to 75 meters). Blooms Apr-Sep.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Marin checkerbloom (*Sidalcea hickmanii* ssp. *viridis*)	Rank 1B.1	Chaparral (serpentine). Elevation ranges from 165 to 1410 feet (50 to 430 meters). Blooms May-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
long-styled sand-spurrey (*Spergularia macrotheca* var. *longistyla*)	Rank 1B.2	Marshes and swamps, meadows and seeps. Elevation ranges from 0 to 835 feet (0 to 255 meters). Blooms Feb-May.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Santa Cruz microseris (*Stebbinsoseris decipiens*)	Rank 1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 35 to 1640 feet (10 to 500 meters). Blooms Apr-May.	**Unlikely.** Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
Mount Burdell jewelflower (*Streptanthus anomalus*)	Rank 1B.1	Cismontane woodland (openings). Elevation ranges from 165 to 490 feet (50 to 150 meters). Blooms May-Jun.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Tamalpais jewelflower (*Streptanthus batrachopus*)	Rank 1B.3	Chaparral, closed-cone coniferous forest. Elevation ranges from 1000 to 2135 feet (305 to 650 meters). Blooms Apr-Jul.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Tiburon jewelflower (*Streptanthus glandulosus* ssp. *niger*)	FE, SE, Rank 1B.1	Valley and foothill grassland (serpentine). Elevation ranges from 100 to 490 feet (30 to 150 meters). Blooms May-Jun.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Mt. Tamalpais bristly jewelflower (*Streptanthus glandulosus* ssp. *pulchellus*)	Rank 1B.2	Chaparral, valley and foothill grassland. Elevation ranges from 490 to 2625 feet (150 to 800 meters). Blooms May-Jul(Aug).	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
Suisun Marsh aster (*Symphyotrichum lentum*)	Rank 1B.2	Marshes and swamps (brackish, freshwater). Elevation ranges from 0 to 10 feet (0 to 3 meters). Blooms (Apr)May-Nov.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
marsh zigadenus (*Toxicoscordion fontanum*)	Rank 4.2	Chaparral, cismontane woodland, lower montane coniferous forest, marshes and swamps, meadows and seeps. Elevation ranges from 50 to 3280 feet (15 to 1000 meters). Blooms Apr-Jul.	**No potential.** The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
two-fork clover (*Trifolium amoenum*)	FE, Rank 1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentine). Elevation ranges from 15 to 1360 feet (5 to 415 meters). Blooms Apr-Jun.	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
saline clover (*Trifolium hydrophilum*)	Rank 1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. Elevation ranges from 0 to 985 feet (0 to 300 meters). Blooms Apr-Jun.	**Unlikely**. Grassland habitat within the Project Area is highly disturbed and occurs within an urbanized matrix. Potentially suitable habitat is too degraded to support this species.	No further recommendations are required.
Pacific Grove clover (*Trifolium polyodon*)	SR, Rank 1B.1	Closed-cone coniferous forest, coastal prairie, meadows and seeps, valley and foothill grassland. Elevation ranges from 15 to 1395 feet (5 to 425 meters). Blooms Apr-Jun(Jul).	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
coastal triquetrella (*Triquetrella californica*)	Rank 1B.2	Coastal bluff scrub, coastal scrub. Elevation ranges from 35 to 330 feet (10 to 100 meters). Blooms .	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.
oval-leaved viburnum (*Viburnum ellipticum*)	Rank 2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 705 to 4595 feet (215 to 1400 meters). Blooms May-Jun.	**No potential**. The Project Area does not contain suitable habitat to support this species.	No further recommendations are required.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
WILDLIFE				
MAMMALS				
Pallid bat ***Antrozous pallidus***	SSC, WBWG High	Found in a variety of habitats ranging from grasslands to mixed forests, favoring open and dry, rocky areas. Roost sites include crevices in rock outcrops and cliffs, caves, mines, and also hollow trees and various manmade structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Unlikely.** Large trees are not located within the Project Area. Some oaks are adjacent to the Project Area and may support roosts, however large trees and snags will not be removed during the Project.	No further actions are recommended for this species.
Townsend's big-eared bat ***Corynorhinus townsendii***	SSC, WBWG High	Associated with a wide variety of habitats from deserts to higher-elevation mixed and coniferous forests. Females form maternity colonies in buildings, caves and mines, and males roost singly or in small groups. Foraging typically occurs at edge habitats near wooded areas, e.g. along streams.	**Unlikely.** The Project Area lacks the caves and structures that this species prefers. Large trees may support occasional day roosts, however large trees are only located adjacent to the Project Area and no trees and snags will not be removed during the Project.	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Salt marsh harvest mouse ***Reithrodontomys raviventris***	FE, SE, SFP	Endemic to emergent salt and brackish wetlands of the San Francisco Bay Estuary. Pickleweed marshes are primary habitat; also occurs in various other wetland communities with dense vegetation. Does not burrow, builds loosely organized nests. Requires higher areas for flood escape.	**No potential.** The Project Area does not contain salt marsh habitat and does not occur adjacent to occupied habitat that may support this species.	No further actions are recommended for this species.
American badger ***Taxidea taxus***	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**Unlikely.** Although the Project Area contains open grassland habitat suitable for foraging, the area is heavily managed it is not contiguous with larger patches of grassland habitat which would be required for this species.	No further actions are recommended for this species.
Mountain beaver ***Aplodontia rufa phaea***	SSC	Occurs only in western Marin County, almost entirely within Point Reyes National Seashore. Found on moist slopes within areas of coastal scrub and other habitats with herbaceous vegetation. Lives in extensive burrow systems and forages on a variety of herbaceous plants.	**No potential.** The Project Area is outside of the documented range for this species.	No further actions are recommended for this species.
San Pablo vole ***Microtus californicus sanpabloensis***	SSC	Saltmarshes of San Pablo Creek, on the south shore of San Pablo Bay. Constructs burrow in soft soil. Feeds on grasses, sedges and herbs. Forms a network of runways leading from the burrow.	**No potential.** The Project Area is outside of the documented range for this species.	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Suisun shrew ***Sorex ornatus sinuosus***	SSC	Tidal marshes of the northern shores of San Pablo and Suisun Bays. Require dense low-lying cover and driftweed and other litter above the mean hightide line for nesting and foraging.	**No potential.** The Project Area does not contain salt marsh habitat and does not occur adjacent to occupied habitat that may support this species.	No further actions are recommended for this species.
Salt marsh vagrant shrew ***Sorex vagrans halicoetes***	SSC	Salt marshes of the south arm of San Francisco Bay. Medium high marsh 6 to 8 feet above sea level where abundant driftwood is scattered among Salicornia.	**No potential.** The Project Area does not contain salt marsh habitat and does not occur adjacent to occupied habitat that may support this species.	No further actions are recommended for this species.
		BIRDS		
Tricolored blackbird ***Agelaius tricolor***	ST, SSC	Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential.	**No potential.** The Project Area does not contain suitable nesting habitat for this species.	No further actions are recommended for this species.
Short-eared owl ***Asio flammeus***	SSC	Occurs year-round, but primarily as a winter visitor; breeding very restricted in most of California. Found in open, treeless areas (e.g., marshes, grasslands) with elevated sites for foraging perches and dense herbaceous vegetation for roosting and nesting. Preys mostly on small mammals, particularly voles.	**Unlikely.** The Project Area does not contain suitable nesting habitat for this species. While the Project Area is not contiguous with any large patches of open space, the eastern portion is currently adjacent to ruderal uplands which could provide a foraging opportunity for this species.	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Burrowing owl ***Athene cunicularia***	SSC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	**Unlikely.** The Project Area contains open grassland habitat suitable for foraging but the site is heavily managed and not contiguous with larger patches of grassland habitat which would be required for wintering and nesting for this species.	No further actions are recommended for this species.
Swainson's hawk ***Buteo swainsoni***	ST	Summer resident in California's Central Valley and limited portions of the southern California interior. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season.	**No potential.** The Project Area is outside of the documented range for this species.	No further actions are recommended for this species.
Western snowy plover ***Charadrius nivosus nivosus***	FT, SSC	Federal listing applies only to the Pacific coastal population. Year-round resident and winter visitor. Occurs on sandy beaches, salt pond levees, and the shores of large alkali lakes. Nests on the ground, requiring sandy, gravelly or friable soils.	**No potential.** There are no sandy beaches, beach dunes, gravel flats or other suitable habitats to support nesting by this species.	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Northern harrier ***Circus hudsonius***	SSC	Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates.	**Unlikely.** The grassland habitat within the Project Area is heavily managed and would not support nesting by this species. The species may occasionally transit through the Project Area.	No further actions are recommended for this species.
American black swift ***Cypseloides niger***	SSC	Summer resident with a fragmented breeding distribution; most occupied areas in California either montane or coastal. Breeds in small colonies on cliffs behind or adjacent to waterfalls, in deep canyons, and sea-bluffs above surf. Forages aerially over wide areas.	**No potential.** The Project Area is outside of the documented range for this species.	No further actions are recommended for this species.
White-tailed kite ***Elanus leucurus***	SFP	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	**Moderate potential.** This species has been documented to nest within approximately 0.75 miles of the Project Area (CDFW 2024a). While the Project Area is not contiguous with any large patches of open space, the eastern portion is currently adjacent to ruderal uplands which could provide a foraging opportunity for this species. A suitable nesting tree is present within 175 feet of the Project alignment.	Refer to section 7.1 - The Project should conduct a nesting bird survey prior to any vegetation removal or ground disturbance. Potential impacts to white-tailed kite would be mitigated for during the pre-construction bird survey.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Salt marsh common yellowthroat ***Geothlypis trichas sinuosa***	SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**No potential.** The Project Area does not contain marsh habitat to support this species.	No further actions are recommended for this species.
California black rail ***Laterallus jamaicensis coturniculus***	ST, SFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic.	**No potential.** The Project Area lacks suitable dense marsh habitat to support this species and has no potential to occur.	No further actions are recommended for this species.
Alameda song sparrow ***Melospiza melodia pusillula***	SSC	Year-round resident of salt marshes bordering the south arm of San Francisco Bay. Inhabits primarily pickleweed marshes; nests placed in marsh vegetation, typically shrubs such as gumplant.	**No potential.** There is no marsh habitat within the Project Area to support nesting and foraging by this species.	No further actions are recommended for this species.
Samuels song sparrow ***Melospiza melodia samuelis***	SSC	Year-round resident of tidal marshes along the north side of San Francisco and San Pablo Bays. Typical habitat is dominated by pickleweed, with gumplant and other shrubs present in the upper zone for nesting. May forage in areas adjacent to marshes.	**Unlikely.** The Project Area lacks the emergent tidal and brackish marsh that this species prefers. It may occasionally forage or migrate through the Project Area but is unlikely to nest there.	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Ridgway's rail ***Rallus obsoletus obsoletus***	FE, SE, SFP	Year-round resident in tidal marshes of the San Francisco Bay estuary. Requires tidal sloughs and intertidal mud flats for foraging, and dense marsh vegetation for nesting and cover. Typical habitat features abundant growth of cordgrass and pickleweed. Feeds primarily on molluscs and crustaceans.	**No potential.** The Project Area lacks suitable dense marsh habitat to support this species and has no potential to occur.	No further actions are recommended for this species.
Sand martin ***Riparia riparia***	ST	Summer resident in riparian and other lowland habitats near rivers, lakes and the ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Historical nesting range in southern and central areas of California has been eliminated by habitat loss. Currently known to breed in Siskiyou, Shasta, and Lassen Cos., portions of the north coast, and along Sacramento River from Shasta Co. south to Yolo Co.	**No potential.** No suitable cliff or bank habitat is present to support nesting by this species.	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
REPTILES & AMPHIBIANS				
California tiger salamander ***Ambystoma californiense***	FE, ST	Populations in Santa Barbara and Sonoma counties currently listed as endangered; threatened in remainder of range. Inhabits grassland, oak woodland, and open ruderal habitats. Adults are fossorial and utilize mammal burrows and other subterranean refugia. Breeding occurs in vernal pools and other seasonal water features.	**No potential.** The Project Area is outside of the documented range for this species.	No further actions are recommended for this species.
California giant salamander ***Dicamptodon ensatus***	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.	**No potential.** The Project Area does not contain suitable breeding and non-breeding habitat for this species.	No further actions are recommended for this species.
California red-legged frog ***Rana draytonii***	FT, SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains.	**No potential.** The Project Area is within the ranges of this species. However, the site does not contain; a) essential aquatic habitat (comprised of breeding and non-breeding habitat with a minimum depths of 20 inches for at least 4 months), b) associated uplands (within 300 feet of suitable aquatic habitat), or c) dispersal habitat connecting two or more essential aquatic ponds or reservoirs nearby. The habitat within the Project Area is unsuitable for this species	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Foothill yellow-legged frog ***Rana boylii***	SSC	Found in or adjacent to rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.	**No potential.** The intermittent drainages within the Project Area do not support suitable breeding and/or non-breeding habitat for this species.	No further actions are recommended for this species.
Red-bellied newt ***Taricha rivularis***	SSC	Inhabits coastal forests from southern Sonoma County northward, with an isolated population in Santa Clara County. Redwood forest provides typical habitat, though other forest types (e.g., hardwood) are also occupied. Adults are terrestrial and fossorial. Breeding occurs in streams, usually with relatively strong flow.	**No potential.** The Project Area does not contain suitable breeding and non-breeding habitat for this species.	No further actions are recommended for this species.
Northwestern pond turtle ***Actinemys marmorata***	FC, SSC	Associated with permanent or nearly permanent water in a wide variety of habitats. Requires basking sites. Nests sites may be found up to 0.5 kilometers from water.	**No potential.** The Project Area lacks suitable perennially ponded backwaters to support this species and has no potential to occur.	No further actions are recommended for this species.
		FISH		
Green sturgeon ***Acipenser medirostris***	FT, SSC	Anadromous; spawns in the Sacramento and Feather Rivers. Preferred spawning substrate is large cobble but ranges from clean sand to bedrock. Adults occur throughout the San Francisco Bay estuary and coastal marine waters.	**No potential.** The Project Area is not within the documented range for this species.	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Northern tidewater goby ***Eucyclogobius newberryi***	FE, SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches; requires fairly still but not stagnant water and high oxygen levels.	**No potential.** This species has been extirpated from San Francisco Bay and all of its tributaries (USFWS 2005).	No further actions are recommended for this species.
Southern coastal roach ***Hesperoleucus venustus subditus***	SSC	Southern Coastal Roach are restricted to the drainages of Tomales Bay/northern SF Bay in the north and Monterey Bay in the south. There are no records of Roach being present in watersheds between these two systems (Baumsteiger and Moyle 2019).	**No potential.** The Project Area is not within the documented range for this species.	No further actions are recommended for this species.
Coho salmon ***Oncorhynchus kisutch***	FE, SE	Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of San Francisco Bay only. Occurs inland and in coastal marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	**No potential.** The Project Area is not within the documented range for this species.	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Steelhead ***Oncorhynchus mykiss irideus***	FT, SSC	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**No potential.** The drainages within the Project Area do not have suitable water depths of riparian cover. No suitable habitat is present within the Project Area for this species.	No further actions are recommended for this species.
Sacramento splittail ***Pogonichthys macrolepidotus***	SSC	Formerly endemic to the lakes and rivers of the Central Valley, but now confined to the Sacramento Delta, Suisun Bay and associated marshes. Occurs in slow-moving river sections and dead-end sloughs. Requires flooded vegetation for spawning and foraging for young. A freshwater species, but tolerant of moderate salinity (10-18 parts per thousand).	**No potential.** The Project Area is not within the documented range for this species.	No further actions are recommended for this species.
Longfin smelt ***Spirinchus thaleichthys***	FE, ST	Gulf of the Farallones from Russian River to Pillar Point, Half Moon Bay, and salt and freshwater habitats upstream of the Golden Gate including the San Francisco Bay, Sacramento - San Joaquin River Delta, and their tributaries where found.	**No potential.** The Project Area is not within the documented range for this species.	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Eulachon ***Thaleichthys pacificus***	FT, SSC	Found in Klamath River, Mad River, Redwood Creek and in small numbers in Smith River and Humboldt Bay tributaries. Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand and woody debris.	**No potential.** The Project Area is not within the documented range for this species.	No further actions are recommended for this species.
INVERTEBRATES				
California freshwater shrimp ***Syncaris pacifica***	FE, SE	Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main stream flow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	**No potential.** The intermittent ditches within the Project Area do not support adequate year-round habitat for this species.	No further actions are recommended for this species.
Western bumble bee ***Bombus occidentalis***	SC	Formerly common throughout much of western North America; populations from southern British Columbia to central California have nearly disappeared (Xerces 2015). Occurs in a wide variety of habitat types. Nests are constructed annually in pre-existing cavities, usually on the ground (e.g. mammal burrows). Many plant species are visited and pollinated.	**No potential.** Western bumble bee is believed to have been extirpated from Marin County. No extant occurrences are known from the vicinity.	No further actions are recommended for this species.

SCIENTIFIC NAME	STATUS	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Monarch butterfly ***Danaus plexippus plexippus***	FC	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.	**Unlikely.** The Project Area does not contain adequate tree groves of preferred species for monarch winter roosts. There is no breeding habitat present within the Project Area. The species may occasionally transit over the Project Area.	No further actions are recommended for this species.
Crotch's bumble bee ***Bombus crotchii***	SC	Range largely restricted to California, favoring grassland and scrub habitats. Typical of bumble bees, nests are usually constructed underground.	**Unlikely**. The Project Area is heavily managed and due to the high level of disturbance, there is a lack of foraging resources throughout the flight season. The Project Area is located within a highly urban environment with low connectivity to natural or seminatural areas.	No further actions are recommended for this species.

BGEPA:	Bald and Golden Eagle Protection Act Species
FC:	Federal Candidate for Listing
FE:	Federal Endangered
FT:	Federal Threatened
SC:	State Candidate for Listing
SE:	State Endangered
SFP:	State Fully Protected Animal
SR:	State Rare
SSC:	State Species of Concern
ST:	State Threatened
Rank 1A:	Plants presumed extinct in California
Rank 1B:	Plants rare, threatened, or endangered in California and elsewhere
Rank 2:	Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3:	Plants about which we need more information – a review list
Rank 4:	Plants of limited distribution – a watch list

Potential for Occurrence:

No potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is

unsuitable. The species has a moderate probability of being found on the site.
High potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
Present. Species was observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

APPENDIX B. TRANSPORTATION ANALYSIS

November 19, 2024

Mr. Rob Carnachan
WRA, Inc.
2169-G East Francisco Blvd.
San Rafael, CA 94901

Draft Transportation Assessment for the Olive Avenue Roadway Improvement Project

Dear Mr. Carnachan;

As requested, W-Trans has prepared a focused transportation assessment for the Olive Avenue Widening Project in the City of Novato. The purpose of this letter is to present the results of our assessment of the potential transportation impacts associated with the project, as required by the California Environmental Quality Act (CEQA). We have performed this assessment using information contained in the project description prepared by WRA and dated November 2024, through field reviews, and through review of prior assessments included in an IS/MND prepared by GHD in 2015 for a former version of the Olive Avenue widening project. The widening project includes the segment of Olive Avenue between Redwood Boulevard and Railroad Avenue, including the Sonoma Marin Area Rail Transit (SMART) crossing. While not directly related to transportation, the project also includes construction of a habitat restoration area on Pacheco Creek near North Hamilton Parkway in southeast Novato.

CEQA Checklist Transportation Requirements

The criteria evaluated in this analysis are consistent with the environmental checklist found in Appendix G of the CEQA Guidelines, as follows.

Would the project:

a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
b. Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
d. Result in inadequate emergency access?

Project Components Affecting Transportation

Transportation-related project objectives include improving and widening Olive Avenue to accommodate a center turn lane, adding bike lanes and sidewalks to improve public safety, rehabilitating the existing pavement along Olive Avenue, and improving sight distance approaching the SMART railroad crossing.

Olive Avenue would be modified as follows between Redwood Boulevard and Olive Avenue and just west of the SMART crossing:

- Widen the roadway from approximately 40 feet to approximately 80 feet;
- Add sidewalks on the north side of the street and reconstruct sidewalks on the south side;
- Add Class II bike lanes in both directions of travel;
- Add a center two-way left-turn lane;
- Modify the existing single-lane westbound approach at the Redwood Boulevard intersection to include a dedicated through lane, approximately 90-foot left-turn pocket, and approximately 600-foot right-turn lane;

- Construct a new driveway along the north side of Olive Avenue into the undeveloped commercial property east of Trader Joe's, including a raised channelizing island to restrict inbound and outbound movements to right turns; and
- Elevate the roadway to improve sight distance at the railroad crossing.

The project would also extend new sidewalks and bicycle lanes through the SMART crossing and Railroad Avenue intersection, connecting to existing pedestrian and bicycle facilities.

Project Impacts on Multimodal Circulation System

Public Transit

Marin Transit Route 654 runs in the westbound direction of Olive Avenue on school day afternoons and is currently the only public transit bus route that operates on the corridor. There are no bus stops for Route 654 within the project construction zone. Olive Avenue would remain partially open to vehicle travel during construction; accordingly, the project's impact on bus transit service would be less than significant. No long-term impact on bus routes would occur beyond improving pedestrian access to bus stops, which would be a beneficial impact.

While some construction activities associated with the project would require work within the SMART commuter rail corridor right-of-way, such activities are anticipated to avoid physical disturbance to the rail infrastructure at the Olive Avenue SMART line grade crossing. The City of Novato would obtain an encroachment permit from SMART, which would specify when construction work could occur within the SMART right-of-way, limiting the potential for disruptions to rail service. Construction activities are therefore expected to have a less-than-significant impact on the performance or safety of rail service. Following construction, the project would not conflict with rail service, and no operational impact would occur.

Bicycle and Pedestrian Facilities

No bicycle facilities are currently provided on the segment of Olive Avenue within the project construction area. Sidewalks currently exist along portions of the south side of the street, with a gap near the SMART rail line, and no sidewalk facilities exist on the north side. Following construction, the reconfigured roadway would establish Class II striped bicycle lanes as envisioned in both the *City of Novato General Plan 2035* and the *City of Novato Bicycle/Pedestrian Plan*. Sidewalks would also be provided on both sides of Olive Avenue in the project area, consistent with improvements identified in the Bicycle/Pedestrian Plan. The project would fill gaps in both the pedestrian and bicycle networks, maintaining consistency with General Plan Policy MO 6 which calls for Complete Streets practices to be incorporated into the design of City streets, as well as Policy MO 7 which requires incorporation of infrastructure to enhance multimodal circulation when developing plans for retrofitted roadways. The City would be required to comply with CPUC requirements related to pedestrian and bicycle accommodations at railroad crossings, resolving potential impacts related to the performance and safety of bicycle and pedestrian facilities during operation.

Finding - The project is consistent with adopted policies regarding multimodal circulation and would have a less-than-significant impact on the performance and safety of non-auto modes.

Vehicle Miles Traveled

CEQA statute Section 15064.3 (b)(2), "Determining the Significance of Transportation Impacts," specifies that an analysis of Vehicle Miles Traveled (VMT) shall be assessed when considering potential impacts associated with land use and transportation projects. The section states, "Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less-than-significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements." The publication *Transportation Impacts (SB 743) CEQA*

Guidelines Update and Technical Advisory, California Governor's Office of Planning and Research (OPR), 2018 (referred to herein as the *Technical Advisory*) contains additional guidance on the assessment of transportation project VMT. Because the City of Novato has not yet adopted standards of significance for evaluating VMT, guidance provided in the *Technical Advisory* was used in this assessment.

The *Technical Advisory* provides guidance as to the types of transportation projects that "would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis." The characteristics of the proposed project would fall under four of these categories; following is a description of each along with a summary of qualifying project characteristics.

- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety – The project would include construction of a new center turn lane and new right-turn lane, each approximately 0.12-miles long and intended to improve safety by providing space for inbound and outbound left turns at side streets and driveways. The center lane and right-turn lane would not serve through traffic or constitute the addition of new through lanes so would be expected to cause no change to VMT or result in induced travel demand.
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left-, right-, and U-turn pockets, or emergency breakdown lanes that are not utilized as through lanes – The project would add turn lanes and reconfigure lanes at the Redwood Boulevard/Olive Avenue intersection; these changes would be expected to result in no change to VMT or result in induced travel demand.
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow – The project would result in the need to modify signal operation at the Redwood Boulevard/Olive Avenue intersection. Such changes would not be expected to affect VMT or result in induced travel demand.
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way – A key component of the project is to fill existing gaps in the sidewalk and bicycle network along Olive Avenue. The project would include new sidewalks on the north side of the street, fill sidewalk gaps on the south side of the street, and add new on-street bike lanes. These improvements are expected to increase travel by non-auto modes and would be expected to have a beneficial impact in reducing VMT.

Based on this assessment of the proposed project's characteristics in accordance with guidance contained in the *Technical Advisory*, the project would not be anticipated to measurably increase vehicle travel and would not be subject to an induced travel analysis. Consistent with CEQA Section 15064.3 (b)(2), because the project is anticipated to result in no measurable increases in VMT, the project may be presumed to cause a less-than-significant transportation impact. The determination of a less-than-significant VMT impact for the project would remain unchanged in the cumulative condition. As noted in the *Technical Advisory*, the finding of a less-than-significant project VMT impact in the near-term typically also implies a less-than-significant cumulative impact.

With respect to the project component involving the habitat restoration area on Pacheco Creek, no vehicle travel would be generated upon completion, so there would be no associated VMT impact. Construction period VMT is addressed below.

Finding – The project would have a less-than-significant impact on vehicle miles traveled.

Safety of Design Features

A primary goal of the project is to improve safety for all roadway users on Olive Avenue. The project would construct a new center turn lane, which would remove some of the potential vehicle conflicts at driveways associated with automobile left-turn movements onto and off of the street. On-street bicycle lanes and sidewalks on both sides of the street would also be added, providing dedicated space for non-auto users of the corridor. The project would also improve sight distance along Olive Avenue by elevating the roadway near the SMART crossing.

For these reasons, the project would be expected to improve both operation and safety along the Olive Street corridor, resulting in a beneficial effect.

The California Public Utilities Commission (CPUC) has jurisdiction over the safety of rail crossings in California. Automatic gate arms are already installed at the existing SMART commuter rail crossing on Olive Avenue. As described in the Project Description, the crossing would be constructed in conformance with CPUC General Order 88-B, 72-B, and 75-D for at-grade railroad crossings. Compliance with these regulatory orders would resolve potential hazards related to railroad traffic for motorists, bicyclists and pedestrians from modifications to the existing railroad crossing. The new driveway to be constructed by the project just west of the SMART crossing would be restricted to right turns in and out, reducing the potential for vehicular conflicts or queuing to occur. The project's potential safety impacts related to the SMART rail crossing would therefore be less than significant.

Finding – The project would not increase safety hazards associated with a design feature or incompatible uses, resulting in a less-than-significant safety impact.

Emergency Access

The project would result in the widening of Olive Avenue to include a center turn lane and right-turn lane, improving maneuverability for emergency responder vehicles including the ability to more easily pass other drivers who have slowed, stopped, or pulled to the right. This would be considered a beneficial project impact.

Finding – The project would have a less-than-significant impact on emergency access.

Construction Impacts

Construction on the Olive Avenue project segment is anticipated to last approximately eight months, with activities related to the Pacheco Creek enhancement occurring over a two-year period. During construction, worker vehicles and haul trucks would access the project area from US 101 and local City streets, including Olive Avenue and Redwood Boulevard. Trips associated with the Pacheco Creek enhancement would travel to and from the US 101 corridor via North Hamilton Parkway and Nave Drive. A total of 224 estimated truck haul trips (one-way) are estimated to occur over the duration of the project, and the anticipated construction workforce is estimated to be between 10 and 20 workers per day.

Auto, Pedestrian, and Bicycle Circulation and Safety During Construction

Construction of the project would require closure of roadway shoulder areas and could potentially entail partial or full lane closures. Potential conflicts could occur between slow-moving construction vehicles and automobiles, and temporary partial lane closures could introduce conflicts among vehicles, bicyclists, and pedestrians. The project description indicates that the existing sidewalk on the southern side of Olive Avenue would remain open to pedestrian access during most of the construction. Local businesses on the south side of Olive Avenue would utilize access points along Mulligan Lane when possible. Trader Joe's and other shopping center traffic would remain accessible via the driveway at Redwood Boulevard. Access to businesses in the project construction area would be maintained during business hours.

Because the project could potentially result in short-term safety conflicts among construction vehicles, automobile traffic, pedestrians, and bicyclists, construction-related impacts are considered significant. Following is a recommended mitigation measure to reduce impacts to less than significant.

Mitigation Measure 1: Traffic Control Plan

The City of Novato shall require the construction contractor to prepare and implement a traffic control plan for the proposed construction activities. The plan shall be approved by the City and include measures for re-routing

vehicles, bicycles, and pedestrians during any phases of construction when access would be blocked or restricted. The traffic control plan shall include the following measures and be consistent with the *California Manual on Uniform Traffic Control Devices* (CA-MUTCD):

- Flaggers and signage shall be used to guide drivers through and/or around the construction zone.
- Signs shall be provided to advise bicyclists and pedestrians of temporary detours around construction zones.
- Truck routes shall be identified in the traffic control plan, minimizing to the extent feasible truck traffic on local roadways and residential streets.
- Lane closures shall be limited during peak hours to the extent feasible, and the street restored to normal operations when possible.
- Access to parcels along the corridor shall be maintained as feasible.
- During any occasions when access to a property is blocked, the contractor shall be required to have means readily available to accommodate emergency vehicle access, such as plating over excavations, short detours, and/or alternate routes.
- Emergency responders including police, fire, and ambulance providers, as well as transit providers and schools, shall be notified by the City in advance of the timing, location, and duration of construction activities and the locations and durations of any temporary lane closures.

Implementation of Mitigation Measure 1 would reduce temporary impacts to the performance and safety of auto, pedestrian, and bicycle circulation by requiring the City and its contractor to implement a traffic control plan, reducing construction impacts to a level of less than significant.

Construction Period Vehicle Miles Traveled

While construction of the project may involve temporary lane closures, Olive Avenue is anticipated to remain open during construction, causing no substantive increases to trip lengths that could increase VMT. The project would generate temporary traffic associated with construction vehicle trips and workers. Some of these trips would be associated with heavy vehicles, which are not subject to transportation-focused VMT analyses and impact assessment (the OPR *Technical Advisory* indicates that VMT analyses shall consider the amount of automobile travel attributable to a project, with automobiles defined as cars and light duty trucks). Any increases in trips and VMT associated with construction worker commutes would be temporary and expected to have little to no effect on regional VMT since these worker trips are already occurring, essentially shifting from jobsite to jobsite rather than constituting new trips in the region. Further, with an anticipated workforce of only 10 to 20 workers per day, construction workers would likely generate between 20 and 40 daily trips, which is below the 110 daily trips identified in the OPR *Technical Advisory* to qualify for "small project" VMT screening. For these reasons, the construction impacts associated with the project would be less than significant with respect to VMT.

Emergency Access During Construction

Vehicular access through the construction area would be maintained during construction, including for emergency vehicles. Temporary shoulder and/or lane closures would not preclude emergency responders from accessing surrounding land uses. As such, potential construction impacts associated with emergency access would be less than significant. Additionally, measures included in Mitigation Measure 1 require accommodation of emergency vehicles to surrounding properties, as well as advance notification to emergency service providers of construction-related activities on the corridor.

Finding – The project could have a potentially significant transportation safety impact during its construction period. Implementation of a mitigation measure requiring the preparation of and adherence to a traffic control plan would reduce construction period safety impacts to a less than significant level.

Finding – Construction period VMT impacts would be less than significant.

Finding – Potential impacts to emergency access during construction periods would be less than significant.

Conclusions

- The project is consistent with adopted policies regarding multimodal circulation and would have a less-than-significant impact on the performance and safety of non-auto modes.
- The project would have a less-than-significant impact on vehicle miles traveled.
- The project would not increase safety hazards associated with a design feature or incompatible uses, resulting in a less-than-significant safety impact.
- The project would have a less-than-significant impact on emergency access.
- The project could have a potentially significant transportation safety impact during its construction period. Implementation of a mitigation measure requiring the preparation of and adherence to a traffic control plan would reduce construction period safety impacts to a less-than-significant level.
- Construction period VMT impacts would be less than significant.
- Potential impacts to emergency access during construction periods would be less than significant.

Thank you for giving W-Trans the opportunity to provide these services. Please contact me if you have any questions.

Sincerely,

Zachary Matley, AICP
Principal

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